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PRELIMINARY REPORT ON A MODIFIED TREATMENT OF TETANUS NEONATORUM

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We have reviewed the cases of tetanus neonatorum in African babies admitted to this hospital since January 1953. All these patients were born outside the hospital and none of the births were attended by midwives. A great variety of instruments was used to cut the cords, the commonest being a razor blade or pair of scissors—not always new and certainly not boiled. Apparently it was never considered necessary for the attendant to have washed her hands. A variety of dressings was applied to the cords, such as household rags, grass, leaves, mud, fat, etc.

From January 1953 till the time of writing (June 1955) the cases number 73. Up to May 1955 there were only 2 recoveries and we felt that it was time to set about a new schedule of treatment.

Our previous regime consisted of:

1. Immediate isolation in a quiet semi-darkened screened-off part of a ward (no single-bed wards being available).

2. Immediate sedation with 1 gr. of sodium gardenal intramuscularly.

3. Antitetanus serum, 100,000 units. Of this total 60,000 was given intramuscularly and 40,000 was infiltrated with hyalase around the umbilicus.

4. Aqueous procaine penicillin, 300,000 units, was given intramuscularly on admission and then daily for a variable time.

5. A catheter was passed through the nose into the stomach through which 4-hourly feeds of expressed breast-milk were given.

6. Subsequent sedation consisted of 2 gr. of chloral hydrate given through the nasal catheter before feeds.

7. Magnesium sulphate 50% was given in doses of 0·5 c.c. intramuscularly every 4 hours at first, later 6-hourly, then 8-hourly, and gradually tailed off.

8. Continuous oxygen by means of a nasal catheter.

9. Thorough cleaning of the umbilicus with hydrogen peroxide and then a dressing of tincture merthiolate.

10. As little handling as possible was advised but the babies were gently turned, and apart from removing secretions from mouth, nose, etc., and buttock hygiene, the babies were left undisturbed.

A swab from the septic umbilicus is always sent to the laboratory, but the offending organism is never isolated, in spite of the fact that full anaerobic investigations are undertaken.

In almost every case crepitations were heard in the lungs on admission or very soon after admission, and it appeared that most cases succumbed from bronchopneumonia.

We felt that perhaps our method of sedation was too heavy and that this predisposed to the chest complications, and that the initial dose of 100,000 units of antitetanus serum was too much for these neonates. We also decided it would be worth while trying cortisone or ACTH to overcome the profound stress of this killing disease.

Accordingly we drew up a revised schedule of treatment. Items 1, 2, 4, 9, 10 of the previous schedule were continued, and in the other items the following changes were made:

Less antitetanus serum was given. Initially a dose of 20,000 to 25,000 units was given and all of it intramuscularly, the infiltration around the umbilicus being dispensed with. The same or smaller dose of antitetanus serum could be repeated if necessary.

The catheter for feeding and sedating purposes was left *in situ* for no longer than 24 hours. Thereafter the tube was gently passed at each feeding time.

The maintenance sedation with 2 gr. of chloral hydrate was not continued 4-hourly longer than 24 hours. Thereafter it was only given as required, the dose being reduced and the time interval gradually lengthened.

We encouraged feeding at the breast as soon as the infant was able to open its mouth sufficiently to make an attempt at sucking. For some days after the baby was put to the breast it was necessary to pipette-feed as well to ensure sufficient intake, because the sucking was not fully effective and the baby would rapidly tire.

We did away with the magnesium sulphate, which appeared to be of no benefit and entailed more handling and more injections.

Oxygen was given only by means of an open funnel. This was continuous during the first 24-48 hours and thence only as required.

Long-acting ACTH (Corticotrophin Z) was given in a dose of 20 units immediately on admission and then daily in the same dose for a variable time.

This revised scheme of treatment has brought most gratifying results; we have now had 3 recoveries in our last 4 admissions in May 1955. The case that died was *in extremis* on admission and lived only a few hours.

Briefly the notes of these 3 cases are as follows:

CASE REPORTS

Case 1. N.G., African female admitted on 11 May 1955 at the age of 5 days. Born at home. The cord was cut with a razor blade and fat was applied as a dressing. On the 4th day the infant would not suck at the breast, kept the mouth tightly closed, and held the arms rigid.

On examination the infant had the typical appearance with trismus and the characteristic spasms on being touched, when the whole body became rigid and the infant apnoeic. The umbilicus was dirty, with sticky exudate. Oedema was present in both feet, legs and back. A prominence of the spine was noted in the cervicothoracic region.

Treatment consisted of the following: Antitetanus serum, 20,000 units intramuscularly on admission and repeated on the following day. Sodium gardenal, 1 gr. intramuscularly on admission. Corticotrophin Z, 20 units intramuscularly on admission and daily. Penicillin, 300,000 units intramuscularly on admission and daily. Chloral hydrate, 2 gr. 4-hourly for the first day and then only as required. In other respects (feeding, oxygen, etc.) the regime indicated above was followed.

The patient's condition remained more or less unchanged for 4 days, and then the spasms decreased and the general condition gradually improved. Seven days after admission the chest was filled with moist rhonchi and considerable oedema was still present. Gradually the chest cleared and the oedema subsided. The patient remained febrile for 14 days.

Fifteen days after admission the infant was making attempts to suck at the breast. She still required pipette feeding but soon was able to take each feed at the breast.

No further sedation was given after 14 days and the Corticotrophin Z was stopped after 23 days.

Incidentially the patient had a spina bifida in the cervicothoracic region and a scoliosis in the dorso-lumbar region; no meningocele. The baby was discharged fit and in excellent condition on 17 June 1955.

Case 2. N.N., African female admitted on 13 May 1955 at the age of 10 days. Born at home. The cord was cut with a new razor blade and a rag applied as a binder. On the 6th day the infant refused to suck at the breast and was feverish.

On examination this was a typical case of tetanus neonatorum, the patient going into violent spasm on being touched. There was marked trismus with copious froth issuing from the mouth. The umbilicus was septic. Temperature 103·6°F. Oedema of both feet. Rhonchi all over both lungs.

The treatment in this case was the same as in case 1, except that 25,000 units of antitetanus serum was given intramuscularly on admission and none subsequently, and 500,000 units of penicillin on admission and then 300,000 units daily.

This patient's condition remained unchanged for 4 days and then she started improving rapidly. The chest became clear and the frequency and intensity of the spasms lessened. Thirteen days after admission she was attempting to suck at the breast and from then on she improved to complete recovery.

No sedation was required after 12 days and Corticotrophin Z was stopped 15 days after admission. She was discharged fit and in excellent condition on 7 June 1953.

Case 3. M.N., African male admitted on 15 May 1955 at the age of 7 days. Born at home. The cord was cut by a friend with an unknown instrument. No dressing was applied. On the 6th day the infant refused to suck at the breast.

On examination the infant had the typical appearance with severe spasms, becoming red in the face and apnoeic on being touched. The umbilicus was very dirty with marked inflammation of the surrounding abdominal wall. Oedema of the feet was present. Rhonchi were heard in the chest.

This patient's treatment was exactly the same as in case 1 with the exception that on the 2nd day only 10,000 units of antitetanus serum was given.

This infant had a high fever (104·8°F) on the 6th day after admission and the temperature spiked up to this level for 4 days. During this time bilateral basal crepitations were heard. At this stage the dose of penicillin was increased and intramuscular streptomycin was added.

On the 11th day the spasms were almost continual and 2 gr. of chloral hydrate was given 4-hourly, then later 6-hourly, then 8-hourly, and gradually tailed off. Following this, improvement began and by the 15th day after admission the baby was making attempts to suck at the breast. The chest cleared, he became fully breast-fed and he was discharged fit and in excellent condition on 17 June 1955.

We have made certain observations on our cases over some years. These briefly are:

1. The first complaint from the mother is the infant's inability to suck at the breast.

2. There is complete unawareness that cleanliness is required in dealing with the cord.

3. Most of the infants have oedema of the feet and to a lesser extent of the legs and back. This usually disappears once the infant is able to move freely.

4. The chest signs we feel are probably due to a combination of factors such as inability to swallow saliva, the forceful attempts made at feeding before admission, and the immobility due to rigidity.

This is a preliminary report, and we hope to report again after we have treated a considerable number of cases on these lines.

We wish to record thanks to Dr. S. Disler, Medical Superintendent, King Edward VIII Hospital, for permission to publish these cases, to Drs. H. Nossel and P. J. Le Riche, our housemen, and Sister R. Fouché, who devoted their services to these cases.

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EDITORIAL

INBORN DEFECTS OF THE RENAL TUBULE

If a substance of low molecular weight appears in the urine of an individual in an unusually small or an unusually large amount while the serum content is normal, then it is virtually certain that the renal tubule is responsible for the abnormality. The proximal tubule is concerned with the reabsorption of water, phosphate, amino acids, bicarbonate, calcium, glucose and probably potassium, and may be involved in a number of syndromes in which reabsorption of these substances is deficient.[1] The best known and least serious of them is renal glycosuria. In this condition there is a normal serum-glucose content and consequently no excess is filtered through the glomeruli to be presented to the tubules, as happens in diabetes. On the other hand a normal concentration of sugar in the tubules is incompletely reabsorbed and some therefore appears in the urine.

The condition known as 'vitamin-D-resistent rickets' ts probably caused by a basic inability of the proximal ubule to reabsorb enough phosphate, leading to a low serum-content of inorganic phosphorus. It is, however, also possible to explain the hyperphosphaturia on the basis of a parathyroid stimulation from a reduction in serum calcium caused by a functional intestinal defect, in which the gut is insensitive to vitamin D.

A state of 'idiopathic hypercalcuria' has also been described, and may lead to the formation of renal calculus. Certainly some people constantly pass far more calcium than 'normal', but whether this usually leads to body depletion or whether it is really a response to an abnormally high absorption from the gut is not known. In a few cases it may be evidence of 'pre-osteoporosis', since we know that an excessive loss of calcium precedes clinical osteoporosis by many years.

Diabetes insipidus, in which the tubule does not properly reabsorb water, is sometimes unresponsive to pitressin. This indicates a defect of end-organ response to a hormonal stimulus. In this case, however, it is the distal part of the renal tubule which must be blamed, since the water (some 90%) which is absorbed in the proximal part is known as 'obligatory' and is not under the influence of the posterior pituitary. Amino acids are

VAN DIE REDAKSIE

AANGEBORE NIERBUIS-AFWYKINGS

Wanneer 'n stof van lae molekulêre gewig in buitengewoon groot of buitengewoon klein hoeveelhede in die urine van 'n indiwidu voorkom terwyl die seruminhoud daarvan normaal is, dan kan 'n mens omtrent seker wees dat die nierbuisie vir die abnormaliteit verantwoordelik is. Die proksimale buisie is betrokke by die heropname van water, fosfaat, aminosure, bikarbonaat, kalsium, glukose en miskien ook kalium, en mag verbonde wees met 'n aantal sindrome waarby die heropname van hierdie stowwe ontoereikend is.[1] Die mees bekende en mins belangrike van hierdie simptomegroepe is nierglikosurie. By hierdie kondisie is die serum se inhoud van glukose normaal en gevolglik word geen oorskot, soos by suikersiekte, deur die nierliggaampies na die buisies deurgesyfer nie. Aan die ander kant word 'n normale suikerkonsentrasie in die buisies slegs gedeeltelik herabsorbeer en 'n bietjie suiker word dus in die urine uitgeskei.

Die kondisie wat as ‚vitamien D-weerstaande richitis' bekend is, word waarskynlik veroorsaak deur 'n basiese onvermoë van die proksimale buisie om genoeg fosfaat op te neem. Hierdie onvermoë veroorsaak op sy beurt 'n lae inhoud van anorganiese fosfor in die serum. Te veel fosfaat in die urine kan egter ook toegeskryf word aan 'n byskildklier-prikkeling, wanneer daar te min kalsium in die serum is as gevolg van 'n werkingsdefek van die derms wat hul ongevoelig maak vir vitamien D.

'n Kondisie van ‚idiopatiese hiperkalsurie' word ook beskrywe, en dit mag aanleiding gee tot die vorming van nierstene. Weliswaar skei sommige mense gedurig 'n hoeveelheid kalsium groter as ‚normaal' uit, maar dit kan òf tot 'n liggaamstekort lei òf 'n reaksie op abnormaal hoë absorpsie in die derm wees—die saak is nog nie opgeklaar nie. In 'n paar gevalle mag dit van aankomende osteoporose getuig, want dit is vasgestel dat oormatige kalsium-uitskeiding al plaasvind baie jare voordat osteoporose klinies gediagnoseer word.

Op gevalle van diabetes insipidus waarby water nie behoorlik deur die buisie opgeneem word nie, het pitressien soms geen uitwerking nie, en dit dui op 'n defek in die eind-orgaan se reaksie op hormoonprikkeling. In so 'n geval lê die fout by die distale deel van die nierbuisie, aangesien dit bekend is dat die water (ongeveer 90 persent) wat in die proksimale deel opgeneem word, ‚verpligtend' is en nie deur die agterslymklier beïnvloed word nie. By ‚aangebore sistinurie' word aminosure slegs gedeeltelik herabsorbeer, en die urine bevat dus

much importance in the absence of foetal heart affection'. This statement is not strictly correct, and meconium staining *is* of significance as indicating foetal anoxia[3] (see below).

Unfortunately the foetal heart sounds may disappear with dramatic suddenness, without previous warning, and a dead baby is born for no apparent reason other than asphyxia. Such a tragedy is fortunately rare, but it is less uncommon with postmature infants. In the present series of cases the large majority of postmature babies who were lost died from asphyxia under the above circumstances. In 2 such instances a sudden increase in the loudness of the foetal heart sounds over a wide area of the lower abdomen occurred immediately before a sudden cessation of the heart beats. The object of this paper is to attempt to assess the dangers to the foetus following operative delivery according to the absence or presence of foetal distress, meconium staining of the liquor amnii and postmaturity.

Material

A series of 767 babies delivered by forceps extraction or Caesarean section in hospital and private practice during the years 1942 to 1954 is presented.

All patients were of the European race, and the majority of them were able to give an accurate history of their menstrual dates and other necessary data for accurately assessing 'due dates'.

Only cases presenting by the vertex are included (excluding breech and other presentations, and patients with antepartum haemorrhage).

Other conditions present at time of delivery

Forceps extraction cases included cases with complications as follows:

Pre-eclamptic toxaemia	30 cases
Eclampsia	4 cases
Essential hypertension	32 cases
Heart disease	9 cases
Pulmonary tuberculosis	2 cases
Previous Caesarean section	7 cases

Forceps was applied prophylactically in these patients at the commencement of or soon after the onset of the second stage.

Caesarean Section. Trial labour was followed by Caesarean section in 41 cases of cephalopelvic disproportion (due to contracted pelvis, persistent occipito-posterior positions, or arrest in the transverse diameter of the pelvis).

In 5 patients there was pre-eclamptic toxaemia and in one an ovarian cyst which ruptured during the course of labour.

Postmaturity was calculated as a period of 2 or more weeks over the expected date of confinement estimated as accurately as possible by the usual clinical methods. In 25 out of the 30 cases of postmaturity presented in this series, the date of conception was almost certainly known. In cases of doubt, the patient was not included in this category.

ANALYSIS OF CASES

Cases (according as they were delivered by Caesarean section or forceps) were classified into 3 groups as follows:

Group 1. All cases (i.e. with and without foetal distress).

Group 2. Cases without foetal distress.

Group 3. Cases with foetal distress (i.e. with foetal heart-sound affected). This group was further subdivided into: (*a*) cases with liquor amnii clear or slightly stained with meconium, and with (i) mature babies (i.e. before or at term) and (ii) postmature babies (i.e. 2 or more weeks over the expected date of confinement), and (*b*) cases with thick meconium staining of the liquor amnii and with (i) mature babies and (ii) postmature babies.

Group 1. *Total cases* (767)

The *foetal loss* was 61 babies out of 767 delivered (i.e. 7·9%). Following 644 forceps extractions 55 babies were lost (i.e. 8·5%). Following 123 Caesarean sections 6 babies were lost (i.e. 4·9%).

The *causes of death* were: *Asphyxia* 18 cases (29·5%); *Bronchopneumonia* 15 cases (24·6%); *Foetal malformations* 13 cases (21·1%) as follows—hydrocephalus 7, meningocoele 1, iniencephalus 1, duodenal atresia 1, absence of the anus 1, congenital heart lesions with absence of radius and thumb 1, congenital atalectasis 1; *Intracranial damage* 10 cases (16·4%); *No apparent cause* 3 cases (4·9%); *Syphilitic maceration* 1 case (1·6%); *Icterus gravis* 1 case (1·6%).

TABLE I. ANALYSIS OF ALL CASES (WITH AND WITHOUT FOETAL DISTRESS)

	Total	*Loss*	*C.S.*	*Loss*	*Forceps*	*Loss*
All cases (uncorrected)	767	61 (7·9%)	123	6 (4·9%)	644	55 (8·5%)
All cases (corrected)	752	46 (6·1%)	123	6 (4·9%)	629	40 (6·3%)
Without distress (uncorrected)	570	28 (5·0%)	93	1 (1·0%)	477	27 (5·7%)
Without distress (corrected)	555	13 (2·3%)	93	1 (1·0%)	462	12 (2·6%)
With distress (uncorrected)	197	33 (16·7%)	30	5 (16·7%)	167	28 (17·0%)
(A) Liquor clear or slightly stained with meconium	125	10 (8·0%)	22	1 (4·6%)	103	9 (8·6%)
(i) Mature cases	114	8 (7·0%)	22	1 (4·3%)	92	7 (7·6%)
(ii) Postmature cases	11	2 (18·0%)	Nil	Nil	11	2 (18·0%)
(B) Liquor thickly stained with meconium	72	23 (32·0%)	8	4 (50·0%)	64	19 (30·0%)
(i) Mature cases	53	9 (15·1)	1	Nil	52	9 (17·0%)
(ii) Postmature cases	19	14 (73·3%)	7	4 (57·1%)	12	12 (83·3%)

The *corrected foetal loss* was therefore 46 babies out of 752 delivered (i.e. 6·1%).

Stillbirths accounted for 34 babies (55·7%), and 27 died in the *neonatal* period (45·3%).

Types of forceps extraction. Low forceps 480; mid forceps 151 (including 1 craniotomy); high forceps 13 (craniotomy in 10 cases).

Types of anaesthesia. In 564 cases spinal analgesia was administered for forceps extraction. In the remaining 80 forceps cases trilene, gas and oxygen, chloroform and ether, and local anaesthesia, were employed. For delivery by Caesarean section spinal analgesia was used in 93 cases, and in the remaining 30 pentothal, gas and oxygen with flaccidil, gas and oxygen, and local anaesthesia. Many authorities[4, 5, 6] agree that spinal analgesia is the best agent in cases of foetal distress, when the foetus is not at all affected by the anaesthetic.

Contrary to expectation intracranial damage was not the commonest cause of loss of infant life. In fact it occupied only 4th place in this series, and was responsible for 16·4% of the babies lost (see Table II).

TABLE II. CAUSES OF INFANT DEATHS

	Group 1	*Group* 2	*Group* 3	*Groups* 3 (*A*) (*ii*) *and* 3 (*B*) (*ii*)*
Asphyxia	29·5%	10·7%	45·5%	62·5%
Bronchopneumonia	24·6%	10·7%	33·3%	25·0%
Intracranial damage	16·4%	14·3%	18·1%	12·5%
Malformations ..	21·1%	46·4%	Nil	Nil
Other causes ..	8·4%	17·9%	3·2%	Nil

* Postmature (for classification see below).

The majority of stillbirths followed asphyxia and malformations incompatible with extra-uterine existence. Bronchopneumonia accounted for most of the neonatal deaths.

Potter[7] in an analysis of 1,173 infant deaths occurring from all causes at the Chicago Lying-in Hospital found that anoxia caused 28·7%, birth trauma 13·0%, and pneumonia 6·5%.

It should be mentioned that the majority of cases of pneumonia in this series occurred in the pre-antibiotic era, and that several babies might have been saved had antibiotics been available. It is the impression of the author that not so many deaths occur today with adequate paediatric attention and liberal use of penicillin, aureomycin and terramycin.

Compression of the umbilical cord, viz. prolapse of the cord and cord round the neck, occurred only in 2 cases in this series, both babies being lost through asphyxia.

Group 2. *Cases without foetal distress* (570).

Foetal loss. Out of 570 babies delivered, 28 were lost (5·7%). Following 477 forceps extractions (low 366, mid 101, high 10) 27 babies were lost (5·7%). One infant was lost following Caesarean section.

There were 18 *stillbirths* (9 due to foetal malformation, 3 due to asphyxia, 3 following intracranial damage, 1 syphilitic maceration, and 1 for no apparent cause).

Neonatal deaths (mainly due to foetal malformation or bronchopneumonia) accounted for 10 babies.

The *corrected mortality* was 2·3% (13 babies out of 555 delivered).

The high stillbirth rate (64·3%) was mainly due to foetal malformation (46·4%). Asphyxia, bronchopneumonia and intracranial damage each accounted for almost an equal number of deaths (10·7%).

There were 3 times as many extractions by low forceps as by mid forceps. The large number of high forceps and craniotomy was mainly for the delivery of malformed infants, usually above the pelvic inlet.

The following table compares the foetal loss after forceps extraction in the present series with that reported by other authors.

	Number of forceps	*Mortality*
Wetterdal[8]	1,900	79 (6·0%) *
Queen Charlotte's Hospital[9]	1,300	185 (9·8%) *
D'Esopo and Marchetti[10]	3,713	166 (4·5%) *
Higgins[11]	191	7 (3·6%) *
Author	629	40 (6·3%) *
Author	644	55 (8·5%) †

* Corrected foetal mortality. † Uncorrected mortality.

Group 3. *Cases with foetal distress* (197)

Foetal loss. Out of 197 babies born, 33 were lost (17.6%). Following 167 forceps extractions 28 babies were lost (17·0%). Following 30 Caesarean sections 5 babies were lost (16·7%).

Stillbirths accounted for 16 infants (12 due to asphyxia, 3 due to intracranial damage and 1 bronchopneumonia).

There were 17 *neonatal* deaths (11 due to bronchopneumonia, 3 to asphyxia, and 3 to intracranial damage).

As will be noted there were almost an equal number of stillbirths and neonatal deaths in this group. However, the cause of death shows a marked difference to the cause in cases without foetal distress (see Table II). There were 15 cases of asphyxia causing loss of life (45·5%), and 12 deaths (36·4%) due to bronchopneumonia. One must therefore conclude that once foetal distress supervenes the chances of respiratory complications are greatly increased.

There were 114 low forceps extractions, 50 mid forceps, and 3 high forceps, suggesting more difficult delivery due mainly to prolonged labour following uterine inertia, arrested occipito-posterior positions and transverse arrest in the pelvis.

In order to compare the influence of the mortality rate of meconium staining of the liquor amnii, and postmaturity, group 3 has been further subdivided into 2 sub-groups, viz. (A) *Cases of foetal distress, with clear or slightly stained liquor amnii*, and (B) *Cases of foetal distress with thickly stained liquor.* The influence of postmaturity has also been taken into consideration by dividing both sub-groups (A and B) into (−) mature babies and (π) postmature babies. We thus have the following subdivisions: 3A (−), 3A (π), 3B (−) and 3B (π):

Group 3*A*. Out of 125 babies delivered 10 were lost (8·0%).
Group 3*B*. Out of 72 babies delivered 23 were lost (32·0%).
In mature babies, out of 167, there was a loss of 17 (10·0%).
In postmature babies, out of 30 delivered, 16 were lost (53·3%).

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Without distress (corrected)	555	13 (2·3%)	93	1 (1·0%)	462	12 (2·6%)
With distress (uncorrected)	197	33 (16·7%)	30	5 (16·7%)	167	28 (17·0%)
(A) Liquor clear or slightly stained with meconium	125	10 (8·0%)	22	1 (4·6%)	103	9 (8·6%)
(i) Mature cases	114	8 (7·0%)	22	1 (4·3%)	92	7 (7·6%)
(ii) Postmature cases	11	2 (18·0%)	Nil	Nil	11	2 (18·0%)
(B) Liquor thickly stained with meconium	72	23 (32·0%)	8	4 (50·0%)	64	19 (30·0%)
(i) Mature cases	53	9 (15·1)	1	Nil	52	9 (17·0%)
(ii) Postmature cases	19	14 (73·3%)	7	4 (57·1%)	12	12 (83·3%)

The *corrected foetal loss* was therefore 46 babies out of 752 delivered (i.e. 6·1%).

Stillbirths accounted for 34 babies (55·7%), and 27 died in the *neonatal* period (45·3%).

Types of forceps extraction. Low forceps 480; mid forceps 151 (including 1 craniotomy); high forceps 13 (craniotomy in 10 cases).

Types of anaesthesia. In 564 cases spinal analgesia was administered for forceps extraction. In the remaining 80 forceps cases trilene, gas and oxygen, chloroform and ether, and local anaesthesia, were employed. For delivery by Caesarean section spinal analgesia was used in 93 cases, and in the remaining 30 pentothal, gas and oxygen with flaccidil, gas and oxygen, and local anaesthesia. Many authorities[1, 5, 6] agree that spinal analgesia is the best agent in cases of foetal distress, when the foetus is not at all affected by the anaesthetic.

Contrary to expectation intracranial damage was not the commonest cause of loss of infant life. In fact it occupied only 4th place in this series, and was responsible for 16·4% of the babies lost (see Table II).

TABLE II. CAUSES OF INFANT DEATHS

	Group 1	*Group* 2	*Group* 3	*Groups* 3 (*A*) (*ii*) *and* 3 (*B*) (*ii*)*
Asphyxia	29·5%	10·7%	45·5%	62·5%
Bronchopneumonia	24·6%	10·7%	33·3%	25·0%
Intracranial damage	16·4%	14·3%	18·1%	12·5%
Malformations ..	21·1%	46·4%	Nil	Nil
Other causes ..	8·4%	17·9%	3·2%	Nil

* Postmature (for classification see below).

The majority of stillbirths followed asphyxia and malformations incompatible with extra-uterine existence. Bronchopneumonia accounted for most of the neonatal deaths.

Potter[7] in an analysis of 1,173 infant deaths occurring from all causes at the Chicago Lying-in Hospital found that anoxia caused 28·7%, birth trauma 13·0%, and pneumonia 6·5%.

It should be mentioned that the majority of cases of pneumonia in this series occurred in the pre-antibiotic era, and that several babies might have been saved had antibiotics been available. It is the impression of the author that not so many deaths occur today with adequate paediatric attention and liberal use of penicillin, aureomycin and terramycin.

Compression of the umbilical cord, viz. prolapse of the cord and cord round the neck, occurred only in 2 cases in this series, both babies being lost through asphyxia.

Group 2. *Cases without foetal distress* (570).

Foetal loss. Out of 570 babies delivered, 28 were lost (5·7%). Following 477 forceps extractions (low 366, mid 101, high 10) 27 babies were lost (5·7%). One infant was lost following Caesarean section.

There were 18 *stillbirths* (9 due to foetal malformation, 3 due to asphyxia, 3 following intracranial damage, 1 syphilitic maceration, and 1 for no apparent cause).

Neonatal deaths (mainly due to foetal malformation or bronchopneumonia) accounted for 10 babies.

The *corrected mortality* was 2·3% (13 babies out of 555 delivered).

The high stillbirth rate (64·3%) was mainly due to foetal malformation (46·4%). Asphyxia, bronchopneumonia and intracranial damage each accounted for almost an equal number of deaths (10·7%).

There were 3 times as many extractions by low forceps as by mid forceps. The large number of high forceps and craniotomy was mainly for the delivery of malformed infants, usually above the pelvic inlet.

The following table compares the foetal loss after forceps extraction in the present series with that reported by other authors.

	Number of forceps	*Mortality*
Wetterdal[8]	1,900	79 (6·0%) *
Queen Charlotte's Hospital[9]	1,300	185 (9·8%) *
D'Esopo and Marchetti[10]	3,713	166 (4·5%) *
Higgins[11]	191	7 (3·6%) *
Author	629	40 (6·3%) *
Author	644	55 (8·5%) †

* Corrected foetal mortality. † Uncorrected mortality.

Group 3. *Cases with foetal distress* (197)

Foetal loss. Out of 197 babies born, 33 were lost (17.6%). Following 167 forceps extractions 28 babies were lost (17·0%). Following 30 Caesarean sections 5 babies were lost (16·7%).

Stillbirths accounted for 16 infants (12 due to asphyxia, 3 due to intracranial damage and 1 bronchopneumonia).

There were 17 *neonatal* deaths (11 due to bronchopneumonia, 3 to asphyxia, and 3 to intracranial damage).

As will be noted there were almost an equal number of stillbirths and neonatal deaths in this group. However, the cause of death shows a marked difference to the cause in cases without foetal distress (see Table II). There were 15 cases of asphyxia causing loss of life (45·5%), and 12 deaths (36·4%) due to bronchopneumonia. One must therefore conclude that once foetal distress supervenes the chances of respiratory complications are greatly increased.

There were 114 low forceps extractions, 50 mid forceps, and 3 high forceps, suggesting more difficult delivery due mainly to prolonged labour following uterine inertia, arrested occipito-posterior positions and transverse arrest in the pelvis.

In order to compare the influence of the mortality rate of meconium staining of the liquor amnii, and postmaturity, group 3 has been further subdivided into 2 sub-groups, viz. (A) *Cases of foetal distress, with clear or slightly stained liquor amnii*, and (B) *Cases of foetal distress with thickly stained liquor.* The influence of postmaturity has also been taken into consideration by dividing both sub-groups (A and B) into (τ) mature babies and (π) postmature babies. We thus have the following subdivisions: 3A (τ), 3A (π), 3B (τ) and 3B (π):

Group 3A. Out of 125 babies delivered 10 were lost (8·0%).
Group 3B. Out of 72 babies delivered 23 were lost (32·0%).
In mature babies, out of 167, there was a loss of 17 (10·0%).
In postmature babies, out of 30 delivered, 16 were lost (53·3%).

In group 3A (mature infants) the loss was 8 out of 114 (7·0%).
In group 3B (mature infants) the loss was 9 out of 53 (15·1%).
In group 3A (postmature infants) the loss was 2 out of 11 (18·0%).
In group 3B (postmature infants) the loss was 14 out of 19 (73·3%).

It is obvious from this analysis that the baby which is distressed before delivery has a greater chance of losing its life than the baby which is not distressed. Similarly, when the liquor amnii is thickly stained with meconium the chances of survival are not as good as when the liquor amnii is clear or only slightly stained. The chances of survival of the postmature infant are still further lessened when foetal distress supervenes and particularly when the liquor is thickly stained with meconium.

The incidence of stillbirths was 3 times that of neonatal deaths (12 : 4), mainly the result of asphyxia and bronchopneumonia (see Table II). In 5 cases in the postmature group sudden cessation of the foetal heart beats occurred as the result of intra-uterine asphyxia.

Neonatal respiratory complications due to atalectasis and bronchopneumonia were not infrequent in the 1st 24-48 hours, often requiring observation in an oxygen tent. Feeding difficulties were also relatively frequent because of persistent vomiting of tenacious meconium-stained mucus. Stomach lavage usually relieved this upset.

In the present series the high mortality rate, one feels, could be considerably reduced with expert paediatric attention and by careful supervision of labour, particularly when postmaturity exists. Two babies were saved by prompt delivery with forceps when sudden cessation of the heart beat occurred at the commencement of the second stage of labour (*vide infra*).

RESUSCITATION OF THE BABY

The method of resuscitation employed in this series of cases closely followed the principles outlined by Greenhill,[23], viz.:

(i) *Proper positioning* of the baby with the head down.
(ii) *Adequate warmth.* The asphyxiated baby will not tolerate an inadequately warm atmosphere. Even a few minutes in a cold atmosphere may lessen the child's chances.
(iii) *Adequate clearing of the respiratory passages* of foreign matter, viz. mucus, blood, liquor etc. Due care must be taken with the mucus extractor.
(iv) *Adequate supply of oxygen.* As soon as respirations are established oxygen should be supplied under controlled pressure.

In the neonatal period close cooperation between the obstetrician and paediatrician is the means of saving not a few infant lives.

Meconium staining and postmaturity

Walker[3] in a recent paper stressed the importance of meconium staining of the liquor amnii as evidence, in presentations other than breech, that the foetus was short of oxygen. When meconium is being passed the saturation of oxygen in the blood in the umbilical vein is at or below 30%, and the foetus is not obtaining enough oxygen to survive indefinitely. Termination of labour is therefore in the interests of the child. Meconium staining in the majority of cases of postmaturity suggests therefore that for long periods of time the foetus must suffer from relative asphyxia. The risk to such an infant involved in a long labour must as a consequence be a serious one.

In the present series of cases it was obvious that postmaturity carried with it a risk to the foetus, particularly in the presence of foetal distress with thick meconium staining of the liquor.

The dangers of postmaturity have become increasingly recognized by many authors in recent years. In fact Clifford[12] mentions that postmaturity ranks second only to prematurity as a cause of foetal mortality in primiparous women. He and his associates found that after 300 days of gestation 1 of every 10 infants died and of these 85% died *in utero* and formed no part of the neonatal mortality. They found postmaturity introduces no added risk to the babies of multiparous mothers. There are, however, others who believe that postmaturity does not exist. In view of the increasing importance attached to postmaturity as a cause of infant death, a short discussion on the subject is included in this paper.

POSTMATURITY

Etiology and pathology

The cause of postmaturity remains a problem because the real cause of the onset of labour is not known. It is true that many cases of so-called postmaturity have calculated their dates inaccurately, but there still are patients who 'go over their time' and in whom the foetus dies for no apparent reason other than anoxia.

Browne[13] suggests that as 'term' approaches the placenta becomes more and more senile. Endarteritis occurs in the foetal vessels in the villi and cord. Atrophy of the syncytium takes place on the surface of the villi, so that it becomes less and less adequate to prevent deposition of fibrin and the formation of white infarcts, which is regarded as part of the age changes that take place in the placenta. The result is that the placenta becomes progressively less adequate for foetal respiration, and as term approaches the foetus is in a state of increasing anoxaemia, so that it must be born or die. This argument does not explain the mechanism that the foetus has elaborated to secure its exit from its dangerous environment.

Hamilton and Boyd[14] describe alterations in permeability of the placental membrane, which is most permeable to radioactive sodium at the 36th week, with rapid decline in subsequent weeks. It is therefore reasonable to conclude that there is a gradually increasing foetal hazard of asphyxiation.

Barcroft[15] and his co-workers, in their experiments with the sheep foetus, found as term approaches a gradual falling-off of the oxygen saturation of the blood in the umbilical vein, for which the foetus tends to compensate by a gradual increase in the haemoglobin content of the blood.

Walker[3] recently showed that there is a gradual falling of the oxygen saturation in the blood of the umbilical vein, until meconium is passed, when there is a low oxygen-supply and practically no reserve.

Baird and Walker[16] described a significant rise in the haemoglobin content of the blood of the cord in pregnancies that have passed term, compared with those which have not passed term. Foetal distress was more common in postmaturity and indicated intrapartum asphyxia.

As will be noted from Table I, the foetal mortality rises significantly when foetal distress occurs, particularly with increasing meconium staining of the liquor. The primary cause of this marked increase in loss of life appears to be an increasing asphyxia with prolongation of pregnancy.

Diagnosis of postmaturity

Almost all recognized text-books of obstetrics[1, 2, 17, 18] discuss methods of determining whether postmaturity exists, viz. by menstrual dates, quickening, lightening, size of the uterus, X-rays, etc. These need not be enlarged upon.

Wrigley[19] adds the following useful clinical guides:

(i) When the foetus is postmature it is usually large (well over 7 lb. in weight). There are exceptions to this rule.[20] In this present series there were 2 babies weighing just under 6 lb. who were definitely postmature. The majority were over 7½ lb., and in 9 cases over 8 lb.

(ii) Besides being large the infant is usually more rigid, with increased muscle tone (Wrigley[19] and Mills[21]).

(iii) The quantity of liquor amnii in the amniotic sac does not appear to increase in the last weeks of pregnancy. Therefore the foetus becomes more and more easily palpable with advance of pregnancy. With repeated and careful examination at regular intervals throughout pregnancy even a diminution of liquor is noticed. Burger[22] mentions Runge's danger sign of a decrease in the abdominal circumference due to decrease in amniotic fluid as a valuable and positive criterion of postmaturity.

(iv) Walker[3] stresses the steadily rising maternal weight-curve, with a halt and then a fall of some pounds at or after term, as probably a significant sign of postmaturity.

(v) The majority of cases of postmaturity show a light greenish staining of the liquor amnii before or soon after the onset of labour. In all cases of postmaturity in this present series the liquor was meconium stained.

(vi) 'Grittiness' or granular consistence of the vernix was often noticed by the author in the meconium-stained liquor when postmaturity was present.

(vii) The rapid onset of foetal distress as witnessed by slowing, weakening or irregularity of the heart beats for no apparent reason, particularly when preceded by meconium staining, should make one suspect postmaturity. The dramatic suddenness of cessation of the beats without previous warning is suggestive, particularly when foetal abnormality does not exist or when other organic cause is absent.

Management of postmaturity

This can be summarized in 2 words—avoid postmaturity. Terminate pregnancy when you are reasonably sure that the patient has gone over her due date. Unfortunately this cannot be determined with certainty in many instances; but the vast majority of authors[19–29] agree that induction of labour should be instituted as a rule when there has been a delay in the onset of labour of about 2 weeks over the 'expected time'. Walker induces labour by artificial rupture of the membranes if labour has not started 5-7 days after the estimated date of delivery.

There are however antagonists to this 'interference' with pregnancy who advise expectant management.[30, 31] Others maintain that an increased risk to the mother and foetus arises by 'unnecessary' interference, such as rupture of the membranes.[32]

Wrigley[19] advises medical induction by castor oil, enema and hot bath, pitocin being given the next day if labour has not already started. Quinine is not advised because of its tendency to cause meconium staining of the liquor amnii. Induction is often so successful in pregnancy at term that it is suggested as a test for postmaturity. If labour does not commence within 24 hours, then high puncture of the membranes should be carried out as a routine measure; the result is nearly always satisfactory.

Walker[3] advises artificial rupture of the membranes in all primigravidae over 25 years of age, if labour has not started 5-7 days after the estimated date of delivery, provided the dates are accurate and the infant is of reasonable size. This operation is performed regardless of the state of dilatation of the cervix and the station of the foetal head. Since the commencement of this line of treatment the obstetric death rate has not increased. In fact there is every hope that the mortality rate will be reduced.

Greenhill[33] believes that the 'ripeness' of the cervix is an important indication of the duration of the pregnancy. If the cervix is not effaced, he firmly believes that the pregnancy is not at term, and that pregnancy should be allowed to continue.

According to Walker,[3] when the membranes are ruptured foetal anoxia, as manifested by meconium staining of the liquor amnii, may be found. If this occurs in elderly primigravidae, elective Caesarean section is performed in the interests of the child. If foetal distress develops during labour, as manifested by foetal heart affection and the presence of meconium, oxygen is given to the mother and the case is further assessed. In elderly primigravidae particularly, and if a further period of prolonged labour is to be expected, then Caesarean is carried out. Caesarean section is preferred to a difficult forceps, particularly if the foetus is already anoxic. Walker[3] maintains that it is unusual to find meconium staining at routine inductions at this stage of pregnancy (5-7 days after term), and so in practice Caesarean section is not often done. In multiparae similar action is taken; Caesarean section is rarely resorted to because labour is usually rapid and easy.

Suggested variation in line of treatment of postmaturity

As soon as a period of 14 days over the estimated date of confinement has elapsed, medical induction (without quinine) is carried out. Pitocin is not administered because of the danger of further diminishing an already deficient oxygen supply to the infant by stimulating undue uterine contractions. If labour commences,

and is normal in every respect, delivery is awaited judiciously. However, careful and repeated checking of the foetal heart sounds are recorded at intervals of ½ hour, the axis-traction forceps and the operating theatre being kept in readiness in case indications for immediate delivery should arise. If uterine contractions are poor, the membranes are ruptured artificially as soon as possible. This manoeuvre very often improves the power of the contractions, thereby hastening delivery. Termination of labour by Caesarean section in the elderly primigravida with postmaturity is not resorted to as a routine measure. But should an indication arise endangering the life of the foetus, this operation is advised, especially if the liquor amnii is heavily stained with meconium, even in the presence of normal heart beats. The following cases are of interest because they demonstrate features of postmaturity, and the necessity for careful observation during labour in the interests of the baby.

Case 1. Mrs. Q.W., primigravida, aged 37 years. Periods always regular 4/21-day type. Last normal period occurred on 16 February 1951, and expected date of confinement was estimated to be 23 November. A posterior fundal fibroid was found early on in the pregnancy, which was uneventful and marked by a gain in weight of 20 lb. up to the 36th week. A subsequent loss of 6 lb. occurred during the next 2 weeks. The foetal head was deeply engaged in the pelvis, and the heart beats were regular and of normal rate. On 7 December (i.e. 2 weeks 'over' the estimated date) a routine medical induction was started (without quinine) and 6 hours later good regular contractions were experienced, followed immediately by spontaneous rupture of the membranes, with a lightly-stained greenish liquor amnii. A ½ hourly chart of the foetal heart was recorded, and the axis traction forceps were 'prepared'. About 9 hours after the onset of labour (on 8 December at 2 p.m.) bearing-down efforts were noted. The foetal heart sounds were normal. After 2 bearing-down efforts the heart beats suddenly ceased, without apparent reason. Immediate forceps extraction under light trilene anaesthesia produced an infant (weight 8 lb. 6 oz.) with marked asphyxia pallida, which responded rapidly to resuscitation, thick mucus heavily stained with meconium being aspirated from the upper air passages. The vernix was found to be 'gritty', and the liquor amnii heavily stained with meconium. The placenta was normal, with several small white infarcts.

Comment. This case showed several features suggestive of postmaturity, such as (i) prolongation of pregnancy 2 weeks over the 'estimated date'. (ii) loss of weight, (iii) meconium staining of the liquor amnii, with 'grittiness' of the vernix, (iv) sudden cessation of the foetal heart sounds for no apparent reason.

The necessity for careful and frequent checking of the foetal heart beats was well illustrated in this patient, whose infant would certainly have been lost had the forceps not been 'ready' for immediate use.

Case 2. Mrs. L.A., primigravida, aged 24 years (emergency). Periods had always been regular 6/28-day type. Last normal period 1 June 1950, and expected 'date' 8 March. Apparently normal antenatal care, and foetal head deeply engaged at the 36th week. Labour induced with castor oil and hot bath on 5 April (i.e. when 4 weeks 'overdue'). Poor irregular contractions commenced 8 hours later and membranes ruptured spontaneously, with greenish lightly-stained liquor amnii 2 hours later. Foetal heart sounds were normal and regular. About 12 hours after the onset of contractions the liquor became thickly stained with meconium. In consultation with the house doctor it was found that the cervix was 3 fingers dilated, the foetal head deeply engaged, and the liquor amnii heavily stained with meconium. The foetal heart sounds were persistently slow at 100 beats per minute, and irregular. In view of the obvious foetal distress and the incomplete dilatation of the cervix, a lower-segment Caesarean section was immediately performed. A very distressed infant (weighing 8½ lb.), with heavily stained liquor, and with 'gritty' vernix, was found. Resuscitation by the routine methods failed to produce respirations, and it was only after a catheter was passed into the 'lower air passages' that respirations were restored. The placenta was normal.

Comment. A typical case of postmaturity, as shown by prolongation of pregnancy, and the meconium-stained liquor amnii from the onset of labour. The onset of distress for no obvious reason except for postmaturity, was again very suggestive of that condition.

CONCLUSIONS

The results of the findings in this series of cases confirm what has already been known from time immemorial, viz. that foetal distress is a sign that the life of the infant is threatened. Unless speedy delivery occurs, intra-uterine death will surely happen.

Whilst this series of cases is small, we feel that significant dangers were noted which can be summarized in the following conclusions:

(A) *Foetal distress*

(i) Foetal mortality (uncorrected) in cases of distress (with and without meconium staining) was more than 3 times as high as when there was no distress (the corrected mortality was twice as high again).

(ii) Foetal mortality (uncorrected) following forceps extraction in cases of distress was almost 3½ times as high as when there was no distress (the corrected mortality was twice as high again).

(B) *Meconium staining with foetal distress*

(i) In cases of foetal distress with meconium staining of the liquor the infant mortality was 4 times as high as when the foetal distress was present without meconium staining.

(ii) Following forceps extraction the infant mortality was almost 4 times as high in cases of foetal distress *with* meconium staining of the liquor amnii as when there was no meconium staining.

(C) *The influence of postmaturity on the mortality rate*

The number of cases in this series was too small to be of statistical significance, but the following conclusions were reached:

(i) Few cases of postmaturity come to ultimate operative delivery for postmaturity *per se*.

(ii) Postmaturity *per se* carries with it a definite 'risk' to the foetus, because of the greater tendency to asphyxiation *in utero*. Difficult delivery is another cause of increased 'risk'.

(iii) Postmaturity associated with foetal distress during labour increased the infant mortality to 5 times the mortality when there was no distress (Walker[3] found the obstetric death rate in postmature infants to be 3 times as high at 43 weeks as at 40).

(D) *Causes of infant deaths* (see Table II)

(i) In cases of foetal distress the number of deaths due to asphyxia was 4 times as high as when no distress was present.

(ii) In cases of postmaturity with distress the number of deaths due to asphyxia was 6 times as high as when postmaturity was present without distress.

(iii) Bronchopneumonia was the commonest cause of loss of foetal life in the neonatal period.

(iv) Contrary to expectation intracranial haemorrhage was only the 4th commonest cause of death, being preceded by asphyxia, bronchopneumonia, and malformations of the foetus.

(E) *Management of postmaturity*

(i) Induction of labour in cases of postmaturity is advisable once the condition is diagnosed. The membranes should be ruptured if medical induction fails to bring on labour.

(ii) Careful supervision of the labour, and preparedness, should be the 'watchword' in the conduct of labour in cases of postmaturity.

(iii) There is a place for Caesarean section in the treatment of postmaturity, especially in elderly primigravidae.

SUMMARY

1. Following forceps extraction and Caesarean section in a series of 767 babies delivered with the vertex presenting and the patients in labour, a comparison was made of the foetal mortality in relation to foetal distress and according as the liquor amnii was clear, or slightly stained with meconium, or heavily stained with meconium.

2. Cases have been classified into 3 main groups depending on the presence or absence of foetal distress, the presence or absence of meconium staining of the liquor amnii, and the presence or absence of postmaturity.

3. Detailed causes of foetal death are outlined.

4. Postmaturity is briefly discussed, and its management reviewed.

5. Conclusions are drawn according to the foetal mortality in the various groups of cases.

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HIATUS HERNIA ANAEMIA

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Hiatus hernia has been given much prominence in recent medical literature and the anaemia associated with the condition has also been well described, meriting a special subdivision in Whitby and Britten's text-book on diseases of the blood.[1] It is, however, remarkable that few cases have been described in childhood.

General reviews of hiatus hernia have been written by Harrington,[2] Adler and Fuller[3] and others, who deal fully with the whole problem.

The common sites for these herniae are:

1. Through the foramen of Bochdalek.
2. Through the postero-lateral portion of one or other leaf of the diaphragm (more commonly on the left).
3. Through the foramen of Morgagni in the anterior portion of the diaphragm.
4. Through the oesophageal hiatus.
5. Associated with a congenitally short oesophagus,

in which case a portion of the stomach is pulled into the thorax.

On the whole, types 1 and 2 are caused by congenital absence of a portion of the diaphragm owing to embryological mal-development; types 3 and 4, although commonly associated with congenital weakness, or even absence of diaphragmatic attachments, are often due to a rise in intra-abdominal pressure, and may be seen following motor-car accidents or during pregnancy. Obesity is a common finding in these cases. It has been mooted that the so-called congenital short oesophagus (type 5) might be the result of chalasia of the cardiac end of the stomach, leading to reflux of acid gastric juice, oesophagitis, fibrosis and consequent pulling up of the stomach into the chest.[4]

The symptomatology in particular will depend on the viscera which are involved in the hernia; in general it may be said that symptoms will be referable either to the abdomen or the thorax. In the former cases patients commonly complain of flatulence, dyspepsia, nausea, vomiting, distension etc., particularly after meals and often relieved by changes of posture. In the latter cases symptoms may consist of dyspnoea, anginal pain, palpitations etc. Many cases are symptomless.

Anaemia is a fairly common symptom.

CASE HISTORIES

Case 1. B.J., a European female aged 5½ years, was admitted to the Transvaal Memorial Hospital on 23 May 1953. Previously the child had been treated in another hospital for an anaemia of unexplained origin. That episode had occurred whilst the child was on holiday; she had complained of dizziness and shortness of breath and examination had revealed gross pallor with no other signs of note. The haemoglobin on that occasion was 5 g.%. A blood transfusion was administered and the child was discharged on a daily dose of iron. During that admission one of us (F.F.) had attended the child.

On the present admission there was a history of loss of appetite, tiredness and pallor from the time of discharge from the other hospital, approximately a year previously. On direct questioning the mother said there had been occasional vomiting and that on one occasion the vomitus was dark brown in colour. The stools had never been unduly dark or tarry in appearance. The family history, natal history, 'milestones' and previous illnesses were all non-contributary. During the whole of the previous year the child had been maintained on iron.

On examination she appeared to be a healthy child with slight pallor of the mucous membranes. No other abnormality could be detected on examination. Blood examination was reported on as follows: 'Haemoglobin 9·1 g.%. Erythrocytes 3,500,000 per c. mm. Leucocytes 17,800 per c. mm., neutrophils 60%, lymphocytes 39%, eosinophils 1%, reticulocytes 3%.

'The red cells exhibit marked anisocytosis and hypochromia. An occasional poikilocyte and ovalocyte is noted. Platelets are present in clumps and apparently in normal numbers. An absolute neutrophilia is present. The neutrophils exhibit toxic granulation and "left shift".

'Haemolysis commenced in 0·48% saline, and was complete in 0·26% saline. The fragility of the red cells is thus within the normal range.'

Stool examinations on two occasions revealed a 3+ benzidine test for blood, and a positive amidopyrin test.

The bone marrow was normal with evidence of some hyperplasia—consistent with chronic haemorrhage.

Barium meal was reported on as follows: 'Preliminary screening of the chest reveals a large opacity obscuring the right base. The oesophagus is displaced forward in its lower part. The opacity noted above consists of a large hernia of the whole of the stomach. The oesophagus enters the stomach on its anterior aspect about 1 inch above the diaphragm. There is no shortening of the oesophagus and it appears long enough to reach the diaphragm if straightened. There is no other bowel in the hernia. The pyloric canal appears to be situated at the oesophageal hiatus, and the hernia is through this hiatus, i.e. it is a hiatus hernia. It is an uncommon hernia in that it is wholly to the right of the mediastinum. There is a suggestion of an ulcer in the stomach.'

The child was then referred to the thoracic surgery unit and a repair of the hiatus hernia was performed by Mr. D. Adler. After operation the anaemia recovered completely. This child has been referred to by Adler and Fuller[3] in their series of cases.

Case 2. A.R.M., a European male aged 1 year and 3 months, was admitted to the Transvaal Memorial Hospital on 21 January 1951. There was a history of vomiting from birth, with occasional blood-staining of the vomitus.

Physical examination revealed no abnormality. Barium meal was reported on as follows: 'There is a para-oesophageal hiatus hernia. In the erect position the hernial sac empties of barium, but the hernia does not reduce'.

The blood picture was as follows:

Haemoglobin 10·5 g.%. Colour index 0·95. Erythrocytes 3,680,000 per c. mm. Leucocytes 9,700 per c. mm., (neutrophils 27%, monocytes 12%, lymphocytes 52·5%, eosinophils 8·5%).

The red cells showed anisocytosis and increased diffuse polychromasia.

This patient was fully investigated from every angle and no other cause for the anaemia was found. His nutritional state was excellent. The parents refused surgical treatment and removed him from hospital.

Case 3. B.G., a European male aged 3½ years, was admitted to the Transvaal Memorial Hospital on 1 January 1947 with a history of vomiting since birth and frequent eructations. During the 7 weeks before admission he had had frequent attacks of abdominal pain with one episode of vomiting 'blackish material'.

Physical examination revealed nothing of significance. Nutritional state was excellent.

The blood picture was as follows:

Haemoglobin 10·4 g.%. Colour index 0·83. Erythrocytes 3,920,000 per c. mm. Leucocytes 8,700 per c. mm. (neutrophils 46%, monocytes 3%, lymphocytes 50%, eosinophils 1%).

The erythrocytes showed a slight degree of anisocytosis and diffuse polychromasia.

Barium meal revealed a para-oesophageal hiatus hernia.

Further investigations and treatment were refused by the parents.

DISCUSSION

Anaemia occurred in 50% of 24 cases of short oesophagus and hiatus hernia reported by Husveldt, Thomsen and Wamberg,[5] all in children. It occurred in 20 adults reported by Schwartz and Blumenthal;[6] and in 26·8% of 41 patients in a series of Ritchey and Winsauer,[7] of whom 2 were in children. Murphy and Hay[8] found that 23 out of 67 adult cases had a definite anaemia associated with their hiatus hernia, whilst Gardner[9] reported 28 cases (3 in children under 12 years of age and 3 in adolescents) in all of whom a fairly profound anaemia occurred. Apart from these reports on fairly large series of cases—practically all adults, let it be noted—numerous papers have appeared in the literature of cases in which hiatus hernia and anaemia have been associated.

The mode of production of the anaemia has been the subject of some discussion. In a proportion of cases there is definite peptic ulceration, leading to chronic blood loss. It is postulated in other cases, particularly those in which the hernial ring is small in relation to the contained viscus, that there is a 'nipping' effect which leads to small erosions at the site of the constriction. In other cases it is thought that the constriction produces a state of congestion of the viscus and its lining mucous membrane. This leads to blood loss either by the action of food particles which irritate

and abrade the congested mucous membrane or a slow ooze from the engorged capillaries takes place. It has also been held[10] that the congestion may interfere with the production of a haemopoietic factor in the stomach and lead to anaemia in that manner.

Murphy and Hay[8] describe 7 cases of diaphragmatic hernia in association with pernicious anaemia, which improved with the exhibition of liver preparations and iron. Although this may occur in long-standing cases of hiatus hernia, most reports stress the fact that the anaemia is hypochromic or normochromic and is usually typical of the anaemia associated with chronic blood loss.

In case 1 it should be noted that on both admissions the child had a fairly severe anaemia, the first time following an episode fairly typical of sudden blood loss, although no history was obtained of haematemesis or melaena. On the second admission the history suggested one haematemesis some weeks before admission to hospital, and the child was still anaemic despite adequate treatment with iron. This points to chronic blood loss in addition to the episodes of massive haemorrhage as a factor in keeping the anaemia at a low level. The inability to control the anaemia in this case is not in accord with the experience of some other clinicians. Thus Dyke and Dyas[10] and Crowder and Craddock[11] state that the anaemia, in adults, responds rapidly to medical methods of treatment. Crowder and Craddock state that blood transfusions may be required as an adjunct to iron therapy. All their cases were adults, and very few reports on the condition in childhood have appeared.

The incidence of the symptom in children appears to be less than in adults. This may be due to the fact that most series reported have been by physicians and not paediatricians. However, Hartzell[12], in a résumé of 68 cases of hiatus hernia occurring in children under the age of 10 years, quotes only 2 in whom anaemia was a major finding. Smellie *et al.*[13] in a symposium on hiatus hernia in childhood, do not even mention anaemia as a major symptom; and Waterston [14] merely says 'a few cases develop hypochromic anaemia'.

Since 1947 only 4 children have been admitted to the Transvaal Memorial Hospital with hiatus hernia—the 3 quoted above and a little boy of 4 years old who was admitted recently, since the original draft of this paper was made. This patient had occult blood in the stool on two occasions but showed no anaemia. The 3 cases of anaemia recorded above all demonstrate a moderate degree of hypochromic anaemia, suggestive of chronic blood loss. In each case the child's nutritional state was excellent and in cases 1 and 2 other causes of anaemia were excluded. In case 3 no other cause for the anaemia was found, but full investigation was not completed because the parents removed the child from hospital. The response to iron was poor in case 1 and improvement only became apparent after surgical repair of the hernia.

From the very limited experience of these cases it would appear that the results of surgical treatment are extremely satisfying, as the anaemia in case 1 and the occult blood in the stool in case 4 both cleared up after operation.

It is well to consider hiatus hernia in the diagnosis of all anaemias of obscure origin.

SUMMARY

Three cases of hiatus hernia anaemia in children are recorded and the literature is briefly reviewed. The suggestion is made that in cases of unexplained anaemia the patient should be investigated for hiatus hernia.

We wish to thank Dr. K. Mills, Medical Superintendent of the Johannesburg Group of Hospitals, for permission to record these cases. Cases 1 and 4 were under the care of Dr. A. E. Strawbaun, former Senior Paediatrician; case 2 was under the care of Dr. S. Heymann, Chief Paediatrician; and case 3 was under the care of Dr. S. Javett, Assistant Paediatrician. To these members of the staff of the Transvaal Memorial Hospital our thanks are also due.

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EAST LONDON DOCTORS AND THE POLIOMYELITIS INOCULATION SCHEME

Dr. L. L. Alexander, chairman of the East London Division of the Medical Association of South Africa has forwarded to the *Journal* a copy of the following further letter which the Division on 1 September, 1955 addressed to the Editor of the *East London Daily Dispatch*:

Sir, The East London Division of the Medical Association considers that a reply to the Hon. the Minister of Health's strongly worded criticism of their reaction to the Polio Inoculation Scheme is indicated. We would like to point out that parents were given very little time in which to make up their minds whether they wanted to have their children inoculated or not. This led to the result that every doctor received innumerable enquiries concerning the advisability of this inoculation.

'The medical profession, not having received any detailed information from the Union Health Department or from the Medical Association through its *Journal* was obviously not in a position to advise them.

'This lack of information is not confined to the medical profession of East London as evidenced by Press reports throughout the country. We would like to stress that we were not in any way trying to condemn this vaccine but our protests were directed against the lack of information regarding its properties. Yours faithfully, L. L. Alexander, *Chairman*.'

TUBERCULIN AND X-RAY SURVEYS IN THE TRANSKEI

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and
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These surveys were conducted from the Government Tuberculosis Hospital during 1953 and 1954 in that portion of the Transkei within a radius of about 40 miles of Umtata. This report deals only with Natives, the number X-rayed being 21,080 and the number tuberculin-tested 3,088. Owing to lack of staff the two surveys could not be carried out concurrently. The tuberculin tests were for the most part done on a different set of people from those who were X-rayed.

TUBERCULIN SURVEY

The tuberculin test was done with a single test dose of P.P.D., equivalent to 10 T.U. A reaction with induration not less than 6 mm. in diameter was regarded as positive. The children tested were drawn from schools, about one-quarter in Umtata itself and three-quarters in distant schools. Of the adults about 1/5th lived in Umtata and 4/5ths in outlying areas. The results are shown in Table I. In the last column of the table the results of the 1930 tuberculin survey by Dr. P. Allan[1] in roughly the same area are shown. Unfortunately no true comparison between the two sets of results can be made, because the Allan survey was done with Old Tuberculin 1/5,000 and the definition of a positive reaction is not stated.

MASS X-RAY SURVEY

The incidence of tuberculosis in the Transkei is unknown. Registration of deaths only became compulsory 2 years ago, and so reliable mortality figures do not exist. Notification figures vary so much from district to district that they are obviously quite inaccurate. This is not surprising, for the majority of cases are notified without X-ray or laboratory confirmation of the diagnosis.

In order to get mass X-ray figures as accurate as possible, strict diagnostic criteria have been used. It was decided not to rely on the miniature film only, unless the radiological diagnosis was very obvious (extensive infiltration and cavitation). Whenever possible, large films, sputum tests and follow-up examinations were done. In order to carry out this routine with Natives, who often fail to return for a second examination, a special technique was adopted. X-rays were taken in groups of about 80. As soon as each group was completed, the film was cut, processed and read wet, while the people were kept waiting. All cases with abnormal shadows, unless obviously due to active tuberculosis, had large films taken and sputum specimens collected. If the diagnosis was still in doubt, a follow-up X-ray and sputum test were done after an interval of 3-12 months. Approximately 200 people were traced and persuaded to come for the follow-up examination.

A case was classified as one of active tuberculosis on any one of the following grounds:

1. Sputum positive.
2. Typical radiological appearance of extensive 'soft' tuberculous infiltration, or less extensive infiltration provided cavitation (not suggestive of lung abscess) was present.
3. Typical minimal or moderately extensive tuberculous infiltration—'hard' or 'soft'—provided a later X-ray showed progression of the lesion. (The follow-up X-ray also served to exclude cases with transient infiltration resembling tuberculosis.)
4. Typical primary tuberculosis with evidence of enlarged mediastinal glands.

In a small minority of cases the full routine described above could not be carried out, owing either to technical hitches or to lack of co-operation. In such cases, if there was any doubt about the activity of a lesion, it was the rule to classify it as inactive. With these standards of diagnosis, the results obtained are more likely to be an under-estimate than an over-estimate of the true incidence of active tuberculosis.

As regards silicosis, this diagnosis was not made without a clear-cut history of working underground on the mines. Silicosis with tuberculosis was not diagnosed unless the sputum was positive.

The validity of the results of a survey must depend largely on whether the sample examined is a fair cross-section of the population. Owing to the nature of the terrain, it is impossible in a Native reserve to get a strictly random sample with every person having an equal chance of being included. We tried, however, to get a representative cross-section by working at numerous points, and in order to 'get at' all sections of the population (particularly male adults) it was necessary to include institutions, labour gangs, gaols, and a village location, in addition to the normal population of the countryside. The criticism may be made that some of these are selected groups, but the number X-rayed at any one place was usually well under 500, and could not, therefore, greatly affect the general average. Altogether the mobile unit worked at 57 points, as shown in Table II. The 40 outlying sites were chosen at random in the veld and situated in 5 magisterial districts. It was hoped that spreading the survey over so many places would counteract any abnormal effects of selection.

The effects of not having a random sample cannot be accurately determined. On the one hand, people who felt ill might be especially likely to attend for X-ray, and the general incidence would be exaggerated. On the other hand, in some areas there was undoubtedly suspicion and fear of compulsory hospitalization; this fear would influence people to absent themselves if they felt ill, and the true incidence would be minimized.

The accuracy of the results must depend partly on

the correctness of the ages given, particularly as the incidence varies so greatly in different age-groups. Unfortunately, many of the Natives do not know how old they are, particularly those of middle age or older. Ages had to be estimated by the Native health assistants who filled in the cards. It would therefore be meaningless to separate them into small age-groups, and fairly wide groups have been chosen.

All X-rays with evidence of tuberculosis (other than healed primary) have been classified into one of 7 groups. An 8th group—pure silicosis—has been added. The types of disease in these groups are as follows:

1. Active primary tuberculosis
2. Active post-primary tuberculosis—minimal
3. Active post-primary tuberculosis—more extensive than minimal—exudative
4. Active post-primary tuberculosis—more extensive than minimal—fibrotic
5. Active post-primary tuberculosis—more extensive than minimal—mixed exudative and fibrotic.
6. Inactive post-primary tuberculosis
7. Silicosis with tuberculosis
8. Uncomplicated silicosis

The results for males are summarized in Table III and for females in Table IV. In each table the penultimate line shows the total with active tuberculosis, which is the sum of groups 1-5 and 7. In the last line active tuberculosis is shown as a percentage of the total X-rayed. These figures need little comment except to draw attention (1) to the higher incidence in males than females in the older age-groups, and (2) the large number of cases with fibrotic disease, which seems to show that the Bantu have considerable inherent resistance to the tubercle bacillus.

The total for all age-groups has not been tabulated because the proportion of the numbers examined in the various groups differs from that of the corresponding age-groups of the population. The percentage of active cases actually found in the survey is, therefore, not the percentage in the total population. To calculate the true incidence it is necessary to weight the percentages in the different age-groups according to the population figures. The census figures for 1946 are shown in Table V, and the weighted average percentages for the whole population in Table VI.

This weighted average still does not take into account the under-6 group. However, from clinical experience there is no doubt that the incidence of tuberculosis in this group is very high—certainly as high as the average for the rest of the population. Thus the percentage incidence shown in Table VI can safely be applied to the total population.

As this survey was carried out within a radius of 40 miles of Umtata, the question arises whether the figures can be applied to the whole Transkei. In the Allan tuberculin survey[1] approximately the same infection rate was found in all areas visited, with the exception of the highest part of the Transkei near the Drakensberg. There the tuberculin-positive rate was much lower (e.g. 62% in adults compared with 90% elsewhere) and it is possible that the incidence of tuberculosis is lower there even today. However, this part of the Transkei is sparsely populated; the four districts of Matatiele, Mount Fletcher, Mount Currie and Cala together have only 150,000 Natives out of 1,250,000 for the whole Transkei. Thus, even if the incidence of active pulmonary tuberculosis in these districts is much lower than 2·3%, the average for the whole Transkei would be only slightly affected.

This figure is far higher than those found in any other mass X-ray survey among Natives so far; for example, Schechter[2] in Bechuanaland (1·3%), Fine[3] in Durban (0·94%) and Schneider[4] in Northern Transvaal (0·78%). It is, however, doubtful to what extent comparisons of the various surveys are justified, for the methods of sampling and criteria for diagnosis are unfortunately not standardized.

CONCLUSION

An X-ray survey of 21,080 Natives in the Transkei indicates that the incidence of active pulmonary tuberculosis is 2·3%. Allowing for statistical error, and for a possibly lower incidence in certain districts, it is reasonable to conclude that there are not less than 25,000 cases of pulmonary tuberculosis in the Transkei.

Our thanks are due to the Secretary for Health for permission to publish this paper.

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TABLE I

Age-Group	*Number Tested*	*Number Positive*	*Per Cent Positive*	*Allan Survey*
5— 9	548	332	60·6%	58·2%
10—14	907	714	78·7%	71·2%
15—19	778	702	90·2%	81·3%
20 and over ..	855	795	93·0%	88·9%
Total	3,088	2,543	82·3%	

TABLE II

	Number of Points	*Number X-rayed*
Umtata Location	1	803*
Labourers from Umtata and vicinity ..	1	464
Institutions (excluding primary schools) ..	3	536
Road gangs	3	447
Village gaols	9	853
Random outlying points	40	17,977
Total	57	21,080

* Including 460 school children.

TABLE III—MALES

Age-Group	6—15	16—25	26—35	36—49	*Over* 49
Total X-rayed ..	2,288	1,609	1,149	1,756	1,410
1. Primary tuberculosis	21	—	—	—	—
2. Post-primary—minimal ..	5	8	10	16	2
3. Post-primary—exudative ..	1	4	8	16	6
4. Post-primary—fibrotic	—	3	3	31	36

Age-Group	6–15	16–25	26–35	36–49	*Over* 49
5. Post-primary—mixed	4	4	3	17	38
6. Post-primary—inactive	2	3	4	51	98
7. Silicosis with tuberculosis ..	—	—	—	4	5
8. Uncomplicated silicosis	—	—	1	6	33
Total Active pulmonary tuberculosis	31	19	24	84	87
Percentage active pulmonary tuberculosis	1·35	1·18	2·09	4·78	6·17

TABLE IV—FEMALES

Age-Group	6—15	16—25	26—35	36—49	*Over* 49
Total X-rayed ..	2,687	2,897	2,941	2,792	1,551
1. Primary tuberculosis	26	2	—	—	—
2. Post-primary—minimal ..	1	12	28	26	3
3. Post-primary—exudative ..	4	9	7	13	4
4. Post-primary—fibrotic	3	2	10	26	33
5. Post-primary—mixed	2	8	10	25	27
6. Post-primary—inactive	—	7	12	60	118
Total active pulmonary tuberculosis	36	33	55	90	67
Percentage active pulmonary tuberculosis ..	1·34	1·14	1·87	3·22	4·32

TABLE V—CENSUS FIGURES, 1946

Age-Group	*Males*	*Females*
6—15	177,100	172,600
16—25	82,400	140,100
26—35	50,100	119,400
36—49	69,400	109,500
50 and over	55,400	80,900

TABLE VI—WEIGHTED AVERAGE PERCENTAGE OF ACTIVE TUBERCULOSIS IN ALL AGE-GROUPS

Males only	2·57%
Females only	2·11%
Males and Females	2·30%

'N ANALITIESE OORSIG VAN DIE WERK VAN 'N DEELTYDSE DISTRIKSGENEESHEER IN 'N GROOT DISTRIK OOR EEN JAAR

As gevolg van besprekings oor D.G.-aangeleenthede in die Federale Raad van die Mediese Vereniging en ook as gevolg van vertoë gerig deur die D.G.-groep van die Mediese Vereniging tot die Minister van Gesondheid, het dit geblyk dat daar 'n gebrek aan insig aan beide kante bestaan oor die werklike implikasies van D.G.-werksaamhede en die verhouding van werk verrig tot besoldiging ontvang, asook uitgawes verbonde aan die diens.

Hierdie stuk is opgestel met die doel om diegene wat nie op hoogte van sake is nie in te lig omtrent die werk, tweedens om sekere leemtes in die werk aan te dui en derdens om logiese aanbevelings te maak.

As grondslag is die statistieke van 'n groot deeltydse distriksgeneesheerskap vir die jaar 1954 gebruik. Die distrik omvat 'n area van 2,147 vk. myl met 'n bevolking van 55,597 (blankes 14,674, nie-blankes 40,923). Die werk in hierdie gebied word toegesê aan een deeltydse Distriksgeneesheer wat op eie koste 'n assistent in diens neem om hom by te staan in die uitvoering van sy pligte.

OMVANG VAN DIE WERK

1. *Behandeling van Behoeftiges.* Die meeste nie-blankes in die gebied maak gebruik van die gratis diens van die Distriksgeneesheer. 'n Groot aantal blankes op die dorp word ook deur hom bedien. Dit bring mee dat die getal gevalle wat gedurende 1954 deur die D.G. gesien is 5,982 beloop het. Daagliks is dit gemiddeld (Sondae ingeslote) 16·6 gevalle.

Die volgende besonderhede het betrekking op die aantal besoeke afgelê aan behoeftiges in die distrik:

Getal plase verder as 5 myl van die dorp besoek ..	337
Totale getal besoeke na die plase gedurende die jaar	1,579
D.w.s. daagliks gemiddeld, Sondae ingeslote ..	4·3
Totaal myle gereis	65,964
D.w.s. 'n daaglikse gemiddeld in myle van ..	180·7

(Dit sluit nie besoeke nader as drie myl van hoofkwartier in nie.)

2. *Behandeling van sekere Staatsdienspersoneel.* Hierdie groep sluit in die lede, met hulle vrouens en kinders, van die volgende:

	Lede	*Vrouens*	*Kinders*
Polisiemag	69	43	28
Gevangeniswese	12	11	15
Staande Mag	1	1	1
Totaal	82	65	44

Getal Besoeke: 126

3. *Behandeling van Prisoniers en Besoeke aan Tronke:*

	Dorptronk	*Plaastronk*
Gemiddelde getal prisoniers	280	320
Getal besoeke gedurende jaar	235	58
Getal geselings bygewoon	207	1

4. *Behandeling van Veneriese Siektes:* 3,840 behandelings aan 1,280 pasiënte.

5. *Inentings teen Pokke:* 3,450 inentings.

6. *Ondersoek en Sertifisering van Sielsiekes:* 28 gevalle gesertifiseer.

7. *Lykskouings:* 74 lykskouings, uitgevoer in 'n redelik toegeruste lykhuis verbonde aan 'n hospitaal.

8. *Getuie in die Hof:* Die hof is 64 maal deur die D.G. besoek as getuie in sake van aanranding, verkragting, moord, padongelukke, dronkenskap, ens.

9. *Bevallings van Behoeftiges:* 231 gevalle behandel. Hulle het gewissel van B.B.A.'s, net plasenta uitdruk en normale bevallings tot tangverlossings of abnormale gevalle wat na die hospitaal gestuur moes word. Die omstandighede was in 99% gevalle die vloer van 'n kafferhut, sleg belig en belug, en in die winter bedompig met die rook van 'n misvuur.

10. *Behandeling van Ernstige Epidemiese Siektes:* Daar was gedurende die jaar twee uitbrekings van builepes, wat met behulp van die Departement van Volksgesondheid se velddiens gou beheer en behandel is.

11. *Uitvoer van Operasies.* Dit word van die D.G. verwag dat waar die fasiliteite en bevoegdheid bestaan, hy alle lede van die Dienste soos by nommer 2 genoem asook alle prisoniers, chirurgies behandel teen die tarief van £5 per groot operasie en £3 vir kleinere gevalle. Gedurende die jaar is 19 groot operasies uitgevoer, met inbegrip van galblase, gastrektomie, Halsteads, ens., asook 11 klein operasies.

12. *Ondersoeke vir Sertifikaatdoeleindes.* Hierdie afdeling van die werk behels die ondersoek van persone en die invul van sertifikate ten opsigte van hul liggaamlike geskiktheid vir die volgende:

		Gevalle
(i) Rekrute vir	(*a*) Polisie	16
	(*b*) Gevangeniswese	18
	(*c*) Aktiewe Burgermag	64
(ii) Vakleerlinge—alle beroepe		210
(iii) Staatsdienswerknemers—H.P.K.		40
Paaie Administrasie ens.		30
(iv) Ongeskiktheidstoelaes		65
(v) Vrystelling naturellebelastings		44
		487

Bogenoemde behels in wye trekke die vernaamste pligte van die gemiddelde Distriksgeneesheer, met 'n kort aanduiding van wat gedurende 1954 onder die verskillende hoofde in die betrokke distriksgeneesheerskap gedoen is.

Praktiese Uitvoering van die Werk

Soos vermeld word die werk deur 2 persone behartig. Daar word daagliks omtrent 4 of 5 uur by die spreekkamer toegewy aan konsultasies, die opmaak van medisynes en die uitreik van sertifikate soos by nommer 12 vermeld. Daar word daagliks omtrent 5 uur in die distrik deurgebring om per motor besoeke aan behoeftiges op plase te bring. Daagliks word vry gevalle in die hospitaal besoek. Die meeste polisie gevalle ens. van die 10 omliggende dorpe word hierheen gestuur vir chirurgiese of ernstige mediese behandeling.

Weekliks word die 2 tronke as roetine besoek en feitlik al om die ander dag is daar siekte of geselings wat by die sentrale tronk bygewoon word. Feitlik elke tweede dag is daar óf 'n lykskouing óf 'n hofsaak waar getuienis gelewer moet word. Laasgenoemde is 'n tydrowende faktor veral wanneer die Hoërhof sit, of wanneer sake in die omliggende dorpe afgehandel word.

Faktore wat Werk in Distrik beïnvloed

1. *Drukte van Werk op Plase.* Gedurende oestyd of ploeg- en planttyd na 'n reën, word die D.G. dikwels vir onbenullighede ontbied omdat die werker nie gelos kan word om dorptoe te gaan nie, of omdat die naturelle-arbeider 'n bietjie harder moet werk en dan 'n skeet ontwikkel om die werk te kan vryspring.

2. *Vervoermoeilikhede:*

(*a*) Die naturel het self geen vervoer nie.

(*b*) Die plaaseienaar weier om die naturel 'n sy motor of trokkie of vragmotor op te laai wanneer hy self na die dorp gaan.

3. *Naturelle bederf.* Sommige plaaseienaars huldig die standpunt dat hulle beter diens van hul arbeiders kry as hul skynbaar besorg oor die arbeider se gesondheid is en vir elke klagte die Distriksgeneesheer ontbied. Sommige laat die naturelle selfs verstaan dat hulle die onkoste van die mediese diens dra.

'n Treffende voorbeeld. Twee plase ‚S' en ‚SS', is aangrensend, ewe groot, met ewe veel naturelle-arbeiders, dieselfde tipe boerdery, behuising, voeding en klimaatsomstandighede. Plaas ‚S' is gedurende 1954 32 maal besoek; plaas ‚SS' 6 maal. Op laasgenoemde plaas gaan die boervrou self kyk as daar klagtes is, en indien gewone middels nie help nie, of die geval blyk verdienstelik te wees, ontbied sy die D.G. Op plaas ‚S' huldig die eienaar die standpunt: ‚Nee magtig, ek gaan nie daar inkruip nie.'

4. *Verkeerde Indruk van die Diens.* As daar byvoorbeeld met naturelle gepraat word ook klaarblyklik onnodige uitroepe, is hulle antwoord in sommige gevalle: ‚Jy moet vir ons sorg, jy word daarvoor betaal.' Op die vraag wie hulle die informasie gee, was die antwoord: ‚Die Agent van Johannesburg sê so.' Wie en presies wat die ‚Agent' is, kon nie sonder twyfel vasgestel word nie. Feit bly egter dat die D.G. vir elke skeet ontbied word.

Die getal kere wat verskillende plase besoek is, word in meegaande tabel weergegee:

Getal Kere Besoek	*Getal Plase*
1— 5	*nil*
6—10	65
11—15	30
16—20	9
21—25	1
25—30	1

FINANSIËLE IMPLIKASIES

Besoldiging van Distriksgeneeshere val onder die volgende hoofde:

(i) Salaris.
(ii) Medisynetoelaag.
(iii) Reiskoste teen 1s. per myl buite 3 myl van hoofkwartier.
(iv) Spesiale Dienste.
  (*a*) Bevallings teen £2 per geval.
  (*b*) Operasies, £5 vir groot (*major*) en £3 vir klein (*minor*), indien nie in 'n staatsondersteunde inrigting uitgevoer nie.
  (*c*) Bestryding van ernstige epidemiese siektes teen 10s. per uur, met maksimum van £3 per dag.
  (*d*) Getuie in hof, £1 1s. 0d. per dag en indien weg van hoofkwartier, £1 10s. per dag plus reistoelae.
  (*e*) Ondersoeke by nommer 12 genoem. Alle ondersoeke is teen 2s. 6d. per geval, buiten vir Staatsdienswerknemers gevalle wat 10s. betaal.

'n Paar van die items verdien verder toeligting.

Salaris

Wat die *salarisse* betref, is dit in die meeste gevalle op 'n redelike grondslag gestel buiten vir die feit dat dit van Departementsweë dikwels die skerm is waaragter besoldiging vir enige addisionele werk wegkruip. In die betrokke Distriksgeneesheerskap is die salaris £685 per jaar.

Medisynetoelaag

Hier lê seker die grootste struikelblok van enige Distriksgeneesheer. In die betrokke geval is die toelaag £150 per jaar. As dit nou in aanmerking geneem word dat gedurende die jaar 5,982 gevalle gesien en behandel is, laat dit gemiddeld 6·02 pennies per pasiënt toe vir medisyne. Neem verder in aanmerking dat 'n 8-ons bottel met prop en etiket 3 pennies kos, dan word skaars die prys van die water waarin die medisyne opgelos is, gedek deur wat oorbly van die 6·02 pennies.

Selfs met die mees empiriese voorskrywe kan die medisynetoelaag nie gerek word om die benodigdhede vir meer as 4 maande van die jaar te dek nie.

Reiskoste

Volgens goewermentsberekening dek die 1s. per myl wel die onkoste per myl om 'n motor van ongeveer 3,000 lb. gewig op die pad te hou. Vir kleiner motors is die berekening 7½d. per myl.

Reiskoste is bv. 'n item waar misbruike maklik kan insluip om te vergoed vir 'n tekort in ander toelaes, soos dié hierbo beskrywe. Aan hierdie item is groot onkoste vir die Departement van Volkswelsyn verbonde.

In die betrokke distriksgeneesheerskap is daar gedurende 1954 60,744 myl afgelê na plase verder as 3 myl, en ongeveer 5,220 myl na plekke nader as 3 myl van die hoofkwartiere. Die besoldiging was dus £3,037 5s. 0d. vir reise na plase verder as 3 myl. Geen ekstra besoldiging vir die 5,220 myl vir besoeke van minder as 3 myl van hoofkwartiere word ontvang nie.

Die Distriksgeneesheer en sy assistent gebruik onderskeidelik 'n Chevrolet en 'n Volkswagen.

Die uitgawe aan vervoer alleen was as volg:

Brandstof	£788 14 0
Bande	193 6 6
Reparasies	171 14 0
Totaal	£1,153 14 6

Dit neem nie slytasie en waardevermindering in aanmerking nie.

Spesiale Dienste

Bevallings. As gevolg van die feit dat 'n redelik groot persentasie gevalle wel abnormale krame is, en ook dat die omstandighede uiters onaangenaam en vermoeiend is, is die besoldiging van £2 per geval baie min.

Lykskouings is 'n plig van die D.G. wat, alhoewel moeilik en vermoeiend, en wat 'n groot mate van kennis en vernuf vereis,

geen ekstra besoldiging dra nie. Gedurende 1954 is in die betrokke distriksgeneeshеerskap 74 lykskouings uitgevoer.

Operasies. Volgens die Memorandum van Ooreenkoms word £5 vir 'n groot en £3 vir 'n kleiner operasie betaal waar die operasie nie in 'n staatsondersteunde inrigting uitgevoer word nie. Hierdie bedrae word in elk geval betaal vir lede van polisie en gevangeniswese, asook vir lede van die Staande Mag.

Sedert 1 Mei 1955, na vertoë deur die Federale Raad, is hierdie dienste tot 'n mediese hulpvereniging omskep. Wat die fooie van Distriksgeneeshere betref, weier die Departement konsekwent om meer as £5 en £3 respektiewelik vir groot en klein operasies te betaal. Gedurende 1954 is 19 *major* en 11 *minor* operasies uitgevoer. Die groot operasies behels benewens die gewone breuke ook blindederms, gevalle van gastrektomie, vagotomie, galblase, Halsteads ens.

Die verskil in gelde betaalbaar volgens goedgekeurde hulpvereniging-tarief en D.G.-tarief, is as volg:

Hulpvereniging-tarief	£418 2 0
D.G.-tarief (bedrag wel betaal)	111 0 0

Die verskil van £317 word volgens die Departement van Volksgesondheid deur salaris gedek.

LEEMTES IN DIE STELSEL

Leemtes in die stelsel soos hy vandag is: (1) Gebrekkige kontrole van uitroepe, (2) onoordeelkundige sertifisering van gevalle, en (3) ondoeltreffende besoldiging wat betref: (*a*) medisynetoelaes, (*b*) reiskoste, (*c*) lykskouings, (*d*) bevallings, en (*e*) operatiewe behandelings.

1. *Gebrekkige Kontrole van Uitroepe*

Enige aanvraag vir gratis mediese behandeling moet deur die magistraat of sy verteenwoordiger goedgekeur word.

Op kleiner dorpe word die taak deur die magistraat persoonlik behartig en dan is daar 'n mate van seleksie van gevalle, alhoewel selfs dan een leek so min as die ander kan besluit of 'n geval wel noodsaaklik is al dan nie.

In die meeste distrikte word die werk van uitreiking van aanvrae vir gratis mediese dienste egter aan 'n klerk in die magistraatskantoor opgedra. Die arme persoon moet dikwels heelwat skeltaal aanhoor as hulle nie sonder meer 'n order uitreik nie. Gevolglik word orders sonder enige seleksie uitgereik.

Die gevolg is dat ruim 40% uitroepe in werklikheid onnodig is, bv. waar die pasiënt sonder nadelige gevolge na die dorp kon vervoer word. Hierdie toestand van sake veroorsaak gevolglik 'n geweldige groot onkoste aan onnodige reistoelae vir die Departement van Volksgesondheid of die betrokke Provinsiale Administrasie.

Aangesien die aanstelling op 'n deeltydse grondslag is, is die D.G. gewoonlik van die boeregemeenskap afhanklik vir sy private praktyk, en is hy onwillig om die mense te antagoniseer. Dit mag gebeur dat hy nie streng volgens reël kan optree en gevalle van onnodige oproepe aan die magistraat rapporteer, sodat die koste van die betrokke persoon verhaal kan word nie. In die kleiner distriksgeneeshеerskappe word die geneesheer des te meer in die verleentheid gebring.

2. *Onoordeelkundige Sertifisering*

Omstandighede maak dit soms vir die geneesheer moeilik om applikasies vir ongeskiktheidstoelaes en vrystelling van belasting af te keur. Dit word derhalwe voorgestel dat hierdie saak hersien word om die betrokke staatsdepartement onnodige uitgawes te bespaar.

3. *Ondoeltreffende Besoldiging*

(*a*) *Medisynetoelaes.* Hierdie punt is reeds prakties geïllustreer met 'n paar syfers.

(*b*) *Reiskoste.* Met die verhoging in prys van motors, brandstof, bande, en onderdele tot bykans 300%, en die feit dat die tarief per myl steeds 1s. gebly het, is die implikasie voor die hand liggend. Die 1s. per myl dek wel die gewone vervoer mits daar nie 'n groot herstelwerk nodig is nie, maar dit neem geensins die ure in aanmerking nie. Die salaris is in die meeste gevalle ook nie so groot dat met reg gesê kan word dat die tyd wat op pad deurgebring word sowel as die ander veelvuldige dienste, daardeur gedek word nie.

(*c*) *Lykskouings.* Daar is geen bykomende besoldiging vir die hou van lykskouings nie. Die diens word dikwels onder uiters moeilike omstandighede verrig, omstandighede wat fisies veeleisend en onaangenaam en daarby ook tydrowend is. Dit is slegs in gevalle waar die inligting deur die lykskouing verkry weer in 'n hof as getuienis gelewer word, dat £1 1s. per dag betaal word. Dan is daar die ure wat dikwels vermors word deur te wag totdat die getuienis verhoor word. Wat soms ook gebeur, is dat daar na 'n ander dorp gereis word net om ‚môre' weer te moet kom omdat die getuienis nie daardie dag verhoor word nie.

(*d*) *Bevallings.* Waar bevallings werklik waargeneem word, dikwels onder slegte omstandighede en wanneer daar soms ure by die pasiënt gewag moet word, of moeilike tangverlossings is die besoldiging van £2 per geval buite verhouding tot die diens gelewer.

(*e*) *Operatiewe Behandeling.* Die stelsel soos hy vandag funksioneer is onhoudbaar. Waar 'n Distriksgeneeshеer die ekstra studie, bevoegdheid en kennis ontwikkel het om chirurgiese behandeling doeltreffend uit te voer, behoort daar geen verskil in besoldiging te wees vir daardie spesiale diens of dit nou deur hom of deur 'n ander geneesheer verrig word nie. Om £5 te betaal vir 'n galblaas-operasie of 'n gastrektomie kan ook met geen argumente onder ‚dienste deur salaris gedek' gerym word nie.

GEVOLGTREKKINGS

1. Distriksgeneeshеerwerk behels 'n belangrike en omvangryke deel van die gesondheidstelsel in Suid-Afrika.

(2) Dit is mediese dienste wat dikwels onder moeilike en ongunstige omstandighede verrig word.

(3) Daar bestaan leemtes in die *uitvoering* van Distriksgeneeshеerdienste.

(4) Daar bestaan leemtes in die *administrasie* van Distriksgeneeshеerdienste.

(5) Daar is gebrekkige besoldiging verbonde aan verskillende aspekte van die diens.

(6) Die werk wat van die deeltydse D.G. verwag word, is soms buite verhouding met dié wat een persoon selfs as voltydse amptenaar kan behartig.

Aanbevelings

(1) Beter administrasie van D.G.-dienste wat betref: (*a*) Seleksie van gevalle wat verwys word vir behandeling, en (*b*) uitroepe in distrik.

(2) Beter kontrole van dienste verrig wat betref: (*a*) Sertifisering van gevalle, en (*b*) metode van eise vir myle gereis, bevallings ens.

(3) Beter besoldiging wat betref: (*a*) Medisynetoelae, (*b*) bevallings, (*c*) lykskouings, en (*d*) operatiewe werk.

(4) Hersiening van die Memorandum van Ooreenkoms om aan te pas by nuwe omstandighede.

(5) Kontrole van verhouding tussen omvang van werk en werkkragte daartoe beskikbaar.

ASSOCIATION NEWS : VERENIGINGSNUUS

CAPE TOWN SUB-GROUP OF SOUTH AFRICAN SOCIETY OF INDUSTRIAL HEALTH

A meeting of medical practitioners interested in Industrial Medicine took place in Medical House, Cape Town, on 10 August 1955, when a sub-group of the South African Society of Industrial Health (a group of the Medical Association of South Africa) was formed. The following office-bearers were elected: *Chairman*, Dr. M. P. Freedman. *Acting Secretary*, Dr. A. H. Peires. *Committee Members*, Dr. L. Blumberg, Dr. I. J. Walt, Dr. A. Kahn, Dr. A. Bass, Dr. L. Chait, Dr. M. Meyerowitz.

ADDRESS BY DR. BLUMBERG.

Dr. L. Blumberg delivered an address on *The Place of the Doctor and Nurse in Industry*. Industrial nurses were invited to be present.

Dr. Blumberg drew attention to the distinction between the work of the panel doctor who attended medical-benefit patients in illness and the practice of industrial medicine. 'It was essential', he said, 'for the industrial doctor to be in the factory, observing processes and methods of production and their effects on the worker'.

Industrial diseases has been observed and written about as long ago as the 17th century by the Italian, Ramazini. In England since the end of the 19th century Legg and Oliver have made valuable contributions to the subject, but it was only since the first World War that man's mental and social needs as well as his basic physical needs were seen to be related to his work. His output depends upon his physical and mental condition.

It is sometimes argued that the patient-doctor relationship is impaired by the employment of a full-time factory doctor. This is not supported by experience. On the contrary the system has great advantages. Adequate therapeutic and prophylactic treatment can be given on a mass scale. The early diagnosis of infections, especially of tuberculosis, is simplified, and diagnosis is likely to be more accurate when conditions of work are known.

Existing care for the health of the labour force is negligible, because the great majority of industrialists regard labour as expendable. They must be educated to realize that the greater the health and stability of the labour employed, the greater will be individual productivity and the greater the profit.

The industrial doctor should have access to all departments in the factory for the proper exercise of his function, which is to guard the health and well-being of everyone employed there.

Each new employee should be given a pre-employment examination, including chest X-ray, Wassermann test, blood count, blood-pressure and routine tests. The doctor should also be present at engagement interviews between the personnel manager and the prospective employee, where his specialized training and experience in psychosomatic and neurotic states would be of value. Workers should be assessed not on their disabilities, but on their assets.

In the event of an accident, the doctor should inspect the machine and be able to advise upon hazards. He should also be able to advise on the lay-out, lighting, ventilation and general functioning of workrooms, and suggest methods of dealing with dust, smoke and other nuisances.

Nutrition, vitamin therapy, the care of pregnant women and attendance on injured workmen all fall within his scope. Access to and contact with all groups and individuals will furnish the necessary status on a sound ethical basis.

The industrial nurse is an essential part of industrial medicine. Besides the practical application of therapeutic and preventive treatment, she is the eyes and ears of the industrial doctor. Her close contact with the workers encourages their confidence, so that she can provide the doctor with detailed history and symptoms obtainable in no other way. One of her main functions will always be to prevent sepsis. Together the doctor and nurse should organize and train first-aid teams and conduct lectures. The surgery should be adequately equipped for minor surgery.

Considerable loss in production is caused by workers classified as obsessionist, hysterical or psychotic. In this field the constant observation given by the factory nurse is invaluable. Record-keeping and statistics are another important duty of the nurse.

It would be economically sound for large-scale industries to employ a full-time doctor and nurse. Smaller factories might combine for this purpose.

Questioned on the method of promoting industrial medicine in South Africa, Dr. Blumberg suggested the study of text-books on industrial practice and industrial hazards and diseases. Industrialists should be invited to meet the doctors to exchange views on the subject.

Dr. Freedman in thanking the speaker expressed the hope that the new sub-group would play a part in opening the industrial field for the practice of industrial medicine.

A meeting of the sub-group has been arranged on 14 September 1955, at Red Cross House, 14/16 Riebeeck Street, Cape Town, when Dr. Blumberg will speak on *Night Work*. The following guest-speakers will give short talks: Mrs. Weiss on *Welfare of the Worker*, Mr. Simpkins on *Safety Committees*, and Miss du Toit on *Nutrition of the Worker*.

MEETING OF THE QUEENSTOWN DIVISION

At the ordinary general meeting of the Queenstown Division held in the Frontier Hospital on 18 August 1955 Dr. A. Voortman was in the Chair and 13 other members attended.

Dr. R. Schaffer expressed regret at the passing of Dr. Lionel Goldschmidt and paid tribute to the work he had done as an eminent specialist in urology. He was born in Queenstown and spent his early years there, and Queenstown was proud of him. It was agreed that a donation in his memory be sent to the Benevolent Fund of the Association, and a letter of condolence be written to his widow.

Dr. Schaffer gave an address on *The Use and Abuse of Antibiotics*, based on a sound knowledge of these preparations. He said that too often a combination of antibiotics was wrongly used. He also pointed out that there was a tendency to use antibiotics in cases in which they were entirely unnecessary and occasionally harmful. Questions were invited and a short discussion followed, Dr. G. Dall mentioning the antagonism of certain antibiotics in combination.

The Chairman on behalf of the members thanked Dr. Schaffer for his able and interesting discourse.

Fees for Lectures to Nurses. Dr. Schaffer said that he felt that it was part of the duty of the honorary Staff of the hospital to lecture to the nurses, even if there were no fee at all. He personally would prefer it to be done on an honorary basis, and he felt it was the duty of the profession to assist in the training of nurses. Other members spoke on the matter and it was unanimously agreed: "That the Queenstown Division is not in favour of an increase in fees for lectures to nurses'.

After tea, and sincere thanks to the Superintendent and Matron of the Frontier Hospital, the meeting closed at 10 p.m.

GENERAL PRACTITIONERS' GROUP

The Northern Transvaal Branch of the General Practitioners' Group is projecting the following refresher and postgraduate courses in cooperation with the University of Pretoria:

1. *Refresher Course*

Five-day courses are proposed—lasting from Monday to Friday. These will be held twice a year commencing in 1956, and will be held during March-April and August-September.

The courses will be advertised and enrolment will be at the University at a nominal fee. Priority will be given to members of the Northern Transvaal Branch and, at the inception, numbers will be limited to between 30 and 40 doctors.

Alternate official languages will be used but, if any difficulty is experienced, elucidation in either language will be given.

Course subjects to be dealt with will fall under the following headings: Anatomy, Physiology, Pathology, Medical application, Clinical, Therapeutical.

It is suggested that the mornings be left for members to fill in so that they can have the full run of the hospital to visit and attend different lectures, out-patient clinics, ward visits, operations etc. as they wish. The afternoon and evening sessions will be devoted to lectures, ward visits, clinical discussions etc., as a group.

2. *Attachment as Postgraduate Student*

This is a full-time study and attachment course and may be, for example, for 1, 2 or 12 months. Fee £5 per month, £10 per half-year, or £20 per annum. Enrolment will be with the Medical Faculty of the University of Pretoria. Attachment can be to any one Department, e.g. Anaesthetics, or to any number of Departments, as the applicant wishes. *N.B.—This study period is not counted as portion of postgraduate time for higher qualifications and specialization.*

EDUCATION OF MEDICAL STUDENTS IN GENERAL PRACTICE

In order that the qualifying doctor should have some practical experience and application of general practice, the General Practitioners' Group of the Northern Transvaal Branch of the Medical Association, with the cordial support of the Medical Faculty of the University of Pretoria, has envisaged a scheme whereby final-year students are to be 'farmed out' to the general practitioners of this Branch—town and country—for one month at a time, the scheme to commence in January 1956.

During that month, a student is to be attached to a practitioner or firm and act as a unit of the practice.

It is felt that the 'student doctor' should live in with the practitioner for the month. There are 72 final-year students and, if possible, it is hoped to farm out 8-16 students per month.

The aim of this scheme is to—

1. make the student aware of the practical application of his academic knowledge;
2. give him the chance of personal contact with all sections of the population;
3. teach him the ethics of general practice with reference to—
   (*a*) Patient—doctor relationship;
   (*b*) doctor—doctor relationship;
   (*c*) G.P.—specialist relationship;
   (*d*) the influence the practice bears on his domestic life; and
   (*e*) domestic control of the practice
4. enlighten him on the social and economic problems relative to general practice; and
5. stimulate general practitioners—for there is no greater critic than the student.

OFFICIAL ANNOUNCEMENTS : AMPTELIKE AANKONDIGINGS

MEDICAL ASSOCIATION OF SOUTH AFRICA : ANNUAL GENERAL MEETING

Notice is hereby given that the Annual General Meeting of the Medical Association of South Africa will be held in the Main Lecture Theatre, New Chemistry Block, University of Pretoria, at 12 noon on 17 October 1955.

Agenda

1. Minutes
2. Annual Report and Balance Sheet
3. Election of Auditors
4. Induction of President
5. Other Business

At the conclusion of business, the meeting will be adjourned and reconvened at 8 p.m. in the City Hall, Pretoria, where, combined with the Opening Ceremony of Congress, the President will deliver his Presidential Address. Academic dress will be worn.

A. H. Tonkin
Secretary

Medical House
Cape Town
20 August 1955

FEDERAL COUNCIL

Notice is hereby given that a meeting of the Federal Council will be held at the Hotel Assembly, Van Der Walt Street, Pretoria, on 13 October 1955, at 9.30 a.m.

Agenda

1. Notice convening the meeting
2. Proxies
3. Minutes of previous meeting (circulated)
4. Matters arising out of the minutes
5. Financial statement by Honorary Treasurer
6. Report of the Executive Committee
7. Reports of other Committees
8. Reports deferred from previous meeting
9. Notices of motion transferred from previous meeting
10. New notices of motion
11. Other business

A. H. Tonkin
Secretary

Medical House
Cape Town
20 August 1955

MEDICAL AID SOCIETIES

Members are advised that the name of the *South African Liberal Insurance Company Limited Staff Medical Aid Fund.* which appeared in the list of new societies published in the *Journal* of 30 April 1955, has now been changed to *South African Mutual Fire and General Insurance Company Limited Staff Medical Aid Fund.*

L. M. Marchand
Associate Secretary

Medical House
Cape Town
20 August 1955

MEDIESE VERENIGING VAN SUID-AFRIKA : ALGEMENE JAARVERGADERING

Kennis geskied hiermee dat die Algemene Jaarvergadering van die Mediese Vereniging van Suid-Afrika gehou sal word op 17 Oktober 1955, om 12 uur middag, in die Hoof Lesingsaal, Nuwe Chemiegebou, Universiteit van Pretoria.

Agenda

1. Notule
2. Jaarverslae
3. Verkiesing van Ouditeure
4. Inleiding van President
5. Ander Besigheid

Na afhandeling van dié werksaamhede, word die vergadering verdaag en om 8 nm. in die Stadsaal, Pretoria, hervat, wanneer die openingsplegtigheid van die Kongres plaasvind en die President sy voorsittersrede sal lewer. Akademiese drag word gedra.

A. H. Tonkin
Sekretaris

Mediese Huis
Kaapstad
20 Augustus 1955

FEDERALE RAAD

Kennis geskied hiermee dat 'n vergadering van die Federale Raad gehou sal word in die Hotel Assembly, Van Der Waltstraat, Pretoria, op 13 Oktober 1955, om 9.30 v.m.

Agenda

1. Kennisgewing wat die vergadering belê
2. Volmagte
3. Notule van die vorige vergadering (reeds uitgestuur)
4. Sake wat uit die notule voortspruit
5. Finansiële verslag van die Ere-Penningmeester
6. Verslag van die Uitvoerende Komitee
7. Verslae van ander Komitees
8. Verslae van vorige vergadering oorgehou
9. Voorstelle waarvan kennis op vorige vergadering gegee was.
10. Nuwe kennisgewings van voorstelle
11. Ander sake

A. H. Tonkin
Sekretaris

Mediese Huis
Kaapstad
20 Augustus 1955

MEDIESE HULPVERENIGINGS

Lede word in kennis gestel dat die naam van die *South African Liberal Insurance Company Limited Staff Medical Aid Fund* wat in die lys van nuwe verenigings in die Tydskrif van 30 April 1955 verskyn het, nou verander is na *South African Mutual Fire and General Insurance Company Limited Staff Medical Aid Fund.*

L. M. Marchand
Medesekretaris

Mediese Huis
Kaapstad
20 Augustus 1955

MEDICAL FILM PRODUCTION IN CAPE TOWN

For some time Mr. L. Lewis, S.A.S.C., of Van Riebeeck Film Productions, Cape Town, has been producing surgical colour sound films in cooperation with certain surgeons and, the cost of production having proved to be an obstacle to the full development of this work, Messrs. Caltex (Africa) Ltd. have agreed to sponsor, as a start, 12 films of this kind, provided the scheme were approved by the Medical Association.

The question was referred to the Cape Western Branch, and the Branch Executive expressed approval of the project, offered assistance and suggested cooperation with the University of Cape Town.

The first two films in the project are approaching completion. One concerns the survey of coronary disease in the racial groups at the Cape and has been produced in cooperation with Prof. J. F. Brock of the University of Cape Town and Prof. Ancel Keys of the University of Minnesota during the latter's stay in Cape Town. The other is a film *The Operation of Pericardectomy* which was produced under the direction of Mr. Walter Phillips at Groote Schuur Hospital.

The films in this library will be issued only to members of the medical profession and for medical students. Application for loan should be made to Caltex (Africa) Ltd., Cape Times Building, St George's Street, Cape Town.

PASSING EVENTS : IN DIE VERBYGAAN

Experimental Research into Problems of Ageing: Awards for 1955-56 The Trustees of the Ciba Foundation for the Promotion of International Cooperation in Medical and Chemical Research, wishing to encourage well-conceived research relevant to basic problems of ageing, invite candidates to submit papers descriptive of work in the field for awards for 1955-56.

Five awards, of an average value of £300 each, are available for the period 1955-56. Entries must be received not later than 10 February 1956. The announcement of awards will be made in July 1956.

Entries will be judged by an international panel including Prof. C. H. Best (Toronto), Dr. E. Braun-Menendez (Buenos Aires), Prof. E. J. Conway (Dublin), Prof. G. W. Corner (New York), Prof. A. Haddow (London), Prof. V. R. Khanolkar (Bombay), Prof. R. Nicolaysen (Oslo), Dr. A. S. Parkes (London), and Prof. F. G. Young (Cambridge). They will advise the Executive Council of the Foundation on their findings and will also have power to recommend variation in the size and number of the awards according to the standard of entries.

In making the awards preference will be given to younger workers.

The work submitted should not have been published before 31 July 1955, though it may be under consideration for publication at that date.

The papers may be in the candidate's own language. Papers should not be more than 7,000 words in length and in all cases a summary in English not exceeding in words 3% of the length of the paper must be attached.

Where there is one or more co-author, the name of the leading author should be indicated; it is to him that the award will normally be made, and it will be left to his discretion to share this award appropriately with his co-authors.

Further particulars may be obtained from Dr. G. E. W. Wolstenholme, Director and Secretary to the Executive Council, 41 Portland Place, London, W. 1, to whom also entries must be addressed.

* * *

Union Department of Health Bulletin. Report for the 7 days ended 25 August 1955:

Plague, Smallpox, Typhus Fever: Nil.

Epidemic Diseases in other Countries.

Plague: Nil.

Cholera in Calcutta (India).

Smallpox in Rangoon (Burma); Phnom-Penh (Cambodia); Ahmedabad, Allahabad, Bombay (India); Dacca, Lahore (Pakistan); Tourane (Viêt-Nam); Tanga (Tanganyika).

Typhus Fever in Alexandria (Egypt).

* * *

The Head Office and Journal Committee announce that the Hamilton-Maynard Memorial Medal for 1954 has been awarded to Dr. A. P. Blignault in recognition of his paper entitled *Electric Coma Treatment of Mental Disorder*, published in the *Journal* of 15 May 1954.

The Leipoldt Memorial Medal for 1954 has been awarded to Dr. I. M. Hurwitz in recognition of his paper entitled *What Can Be Done for Senescents*, which appeared in the *Journal* of 20 February 1954.

* * *

Dr. Marcus Getz, formerly of Vryburg, C.P., is now practising at Budleigh, Main Road, Kenilworth, Cape.

* * *

Dr. and Mrs. S. Scher, of Cape Town, left on 24 August on a 3 months' visit to England and the Continent.

* * *

Erratum. In the article *Colporrhexis* by Dr. Louis Resnick and Dr. Willem Hendrik Muller, which was published in the *Journal* on 27 August 1955 (page 818), Dr. Muller's name was unfortunately wrongly printed, and the letters M.R.C.O.G. were added in error.

* * *

The Academy of Psychosomatic Medicine will hold its 2nd Annual Meeting on 6, 7 and 8 October 1955 at the Plaza Hotel in New York City. This year's programme is *The Psychosomatic Aspects of Drug Administration.* There is no registration fee. Guests may attend the Banquet.

Speakers and subjects include: Lester L. Coleman, M.D. (*Wonder Drugs—A Psychosocial Phenomenon*), Harry Kozol, M.D. (*Epilepsy: Modern Treatment with Drugs as a Keystone of Psychosomatic Method*), George B. Koelle, M.D. (*The Clinical Neuro-pharmacology of Mescaline and D-lysergic Acid*), Joseph E. F. Riseman, M.D. (*Experiences with Placebos in the Treatment of Angina Pectoris*), Mark D. Altschule, M.D. (*Ideas About the Metabolism of Epinephrine*), and M. Murray Peshkin, M.D. (*Psychosomatic Aspects of Drugs in Allergy Practice*).

A preliminary programme can be obtained from the Secretary, Ethan Allan Brown, M.D., 75 Bay State Road, Boston, Massachusetts.

* * *

Dr. J. W. A. Hunter, M.D., F.R.C.O.G., Senior Obstetrician and Gynaecologist of St. Mary's group of hospitals, Manchester, England, will show a film of the Fothergill operation in the Physiology Lecture Theatre, Medical School, Mowbray, Cape, on 20 September, at 8.15 p.m., and on 22 September at the same hour and place will deliver an address on *Delivery Following on Colpoperineorrhaphy.* This address was given at the 15th Obstetrical and Gynaecological Congress held at Oxford towards the end of July 1955. The University of Cape Town invites all members to attend Dr. Hunter's address and also the film demonstration.

* * *

Dr. E. H. Burrows, M.B., Ch.B. (Cape Town), who for the past 18 months has held the position of part-time Assistant Editor of this *Journal*, has been appointed as Medical Officer to the Overseas

Recruiting Mission of the Transvaal and Free State Chamber of Mines. He leaves South Africa in about 3 weeks' time; his headquarters will be in London and his work will take him into various countries on the Continent. Dr. Burrows was formerly Assistant Government Pathologist, Cape Town.

* * *

In an article by Dr. Ellis Fasser on *Congenital Toxoplasmosis in South Africa* published in the *Journal* of 16 July 1955 (**29,** 684) a case of this condition described by Dr. Pauline Klenerman in the *Journal* of 21 April 1951 (**25,** 273) was referred to as having been in Cape Town. It has been pointed out that Dr. Klenerman's case was at Durban.

* * *

The engagement has been announced of Olga, youngest daughter of Dr. S. Rachman, of Breyten, to Stanley Bergman of Johannesburg.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Maybaker (S.A.) (Pty.) Ltd. are now marketing Reserpine tablets and state as follows:

Reserpine enhances the action of more potent hypotensive drugs and is particularly valuable in association with ganglion-blocking agents pentolinium ('Ansolysen') or hexamethonium ('Vegolysen') in the management of severe essential and malignant hypertension, permitting a reduction in dosage.

Reserpine exerts a central sedative action which is a useful adjunct in the treatment of hypertension, and is also being investigated in the treatment of mental disorders, particularly in cases characterized by tension and excitement. It is available as 0·25-mg. and 0·50-mg. tablets, in containers of 50 and 500.

IN MEMORIAM

C. G. L. VAN DIJK, M.B., CH.B. (EDIN.)

It is with the deepest regret that we mourn the loss of Dr. C. G. L. van Dijk who passed away at Pretoria on 16 August 1955.

Dr. C. G. L. van Dijk

The late Godfrey van Dijk was born in Pretoria on 31 December 1890. He received his early education in that town and, after an interval of several years, proceeded to Edinburgh University where he took the degree M.B., Ch.B. He returned to this country again in 1920 and started in general practice in Pretoria, where in a comparatively short time he had built up an extensive practice and was regarded as one of the leading practitioners in the town.

In 1938 he decided to confine himself to surgery and practised as a specialist surgeon until a few months before his death.

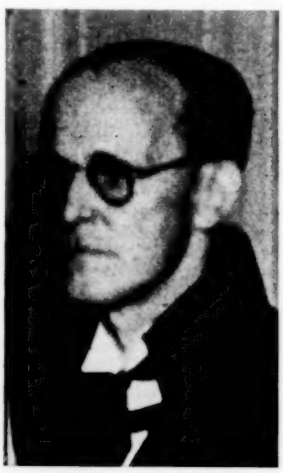
Godfrey van Dijk identified himself with the community and medical life in the town and held many high offices. He was for many years senior surgeon on the staff of the Pretoria Hospital, vice-chairman of the Hospital Board, chairman of the Medical Committee, a Past President of the Northern Transvaal Branch of the Medical Association and its representative for many years on the Federal Council.

In 1948 he was honoured by the Association, when he was elected President of the Medical Congress which was held in Pretoria. He also served on numerous other public bodies including the Museum Board and the St. John's Ambulance Brigade, in which he was appointed Surgeon-in-Chief, Priory of South Africa on 1 January 1950, and held the rank of Commander of St. John. During the last war he was senior medical officer of the Internment Camps and held the rank of Lieut. Colonel.

A man with a zest for life, his bearing and his approach were always most reserved and dignified. He was a man of firm principles and fought hard when necessary to achieve his ends. Above all else, he was a great humanitarian and, within as well as outside his scope of calling, he was ever ready to help those who had fallen on lean times. He will be sadly missed by his old patients, friends and colleagues. To his widow, sons and daughters we extend our deepest sympathy.

ROBERT DOUGLAS ARGYLE DOUGLAS, *M.B.E.*, L.R.C.P. & S. (EDIN.), L.R.F.D. & S. (GLASG.), F.R.C.S. (EDIN.), M.D. (BRUX.)

Dr. A. Simpson Wells, of Cape Town, writes: With the passing of Dr. Douglas on 22 August 1955, the profession at the Cape has lost one of its outstanding general practitioners.



Dr. Douglas

Dr. Bertie (as he was spoken of) was born in Cape Town 76 years ago in the house of his father, Dr. Thomas Douglas, which was at the corner of Burg and Wale Streets. In 1896 Dr. Douglas senior transferred his practice to Dr. Jane Waterson and returned to Scotland, where he took up farming in Berwickshire. His son Robert was educated at Blairlodge School, Scotland, and studied medicine in Edinburgh. He served for several years as H.S. and H.P. at the Edinburgh Royal Infirmary and at hospitals in Durham, Liverpool and elsewhere. In 1910 he joined in practice with the late Dr. Macpherson at Uitenhage; and in 1915 he commenced practice in Cape Town. This was the time of the first World War and shortly after settling in Cape Town Dr. Douglas joined the S.A.M.C. He served in East Africa, where in spite of attacks of malaria and blackwater fever he rendered highly valuable services and was awarded the *M.B.E.*

Later Dr. Douglas built up a very fine practice in Cape Town. He was beloved by his patients, and held in high esteem by his colleagues. He was always the friend as well as valued adviser of those who consulted him. He retired from practice a few years ago on account of ill health.

Dr. Douglas was a Commander of the Order of St. John, held high Masonic Office and was a firm Presbyterian.

In these days of change in our professional life we cannot but regret the passing of this grand old type of general practitioner.

THE LATE DR. L. B. GOLDSCHMIDT

Dr. A. W. S. Sichel writes: The Association has suffered yet another grievous loss in the passing of L. B. Goldschmidt on 18 August 1955 after a long and trying illness.

He was elected a member of Federal Council in 1945 but his work for the Association and the profession goes back to the years preceding the incorporation in 1927 of the Medical Association of South Africa, when he was a member of the old South African Committee and for a time acted as its honorary secretary. He was a very active member of the Council of the Cape Western Branch and became President of that Branch in 1945.

Goldschmidt was no orator in the accepted sense of the term, as he himself was always prepared to admit; nevertheless, he had a shrewd brain and very sound judgment so that in these respects his support in debate was well worth having.

His interests in life were many and varied, embracing philately, cinematography, fishing, shooting and sport generally. He played a good game of golf and latterly took up bowls.

He was one of the first practitioners in the Union to practice urology as a specialty, in which he rose to the top of the tree with a reputation second to none.

On commencing practice in Cape Town in 1921 Goldschmidt met the late Dr. A. Reith Fraser, the first venereologist in the Union to practice as such. A firm friendship sprang up between these two young and brilliant specialists, broken by the untimely death of Fraser in 1926. Fraser, as honorary secretary of the Cape Western Branch in 1921, had been instrumental in infusing new life into an almost moribund organization. It is possible that Fraser's enthusiasm and driving force in the work of the Medical Association acted as a stimulus to Goldschmidt for the part he was destined to play later.

For many years Goldschmidt took a very active part in the work of the South African Red Cross Society and held important offices in the Cape Regional Council; in particular he was associated with the inception and planning of the new Red Cross Children's Hospital and did excellent work on the committee appointed for this purpose.

In recent years his energies were directed to the establishment of a College of Physicians and Surgeons in South Africa and his spadework led to the appointment of a special committee of Federal Council to take the initial steps in the matter. He became chairman of this committee, putting heart and soul into the task of producing a draft constitution. Unfortunately ill-health forced him to resign from the committee but his interest remained unabated as the College slowly but surely came into being. It was a proud moment for him when his name headed the list of signatories to the petition to have the College registered under the Companies Act. He lived just long enough to witness the incorporation of the College of Physicians and Surgeons of South Africa and see his dream come true.

Goldschmidt was a great surgeon and a great-hearted man. He was called away too soon and leaves a gap in our ranks which it will be difficult to fill. The sincere sympathy of all who knew and respected Lionel Goldschmidt will be extended to the members of a devoted family who are left to mourn.

'Forgive my grief for one removed,
Thy creature, whom I found so fair.
I trust he lives in Thee, and there
I find him worthier to be loved.'

BOOK REVIEWS : BOEKRESENSIES

ABDOMINAL OPERATIONS

Abdominal Operations. By Rodney Maingot, F.R.C.S. (Eng.). Third Edition. Pp. 1580 + xii, with 72 illustrations. 170s. London: H. K. Lewis & Co. Ltd. 1955.

Contents: 1. Abdominal Incisions. 2. Stomach and Duodenum. 3. Spleen. 4. Pancreas. 5. Gallbladder and Bile Ducts. 6. Liver. 7. The Vermiform Appendix. 8. Peritoneum, Mesentery, Omentum. 9. External Abdominal Hernia. 10. Intestines. 11. Special Subjects. Author Index. Subject Index.

The latest edition of Maingot's 'Abdominal Operations' has been extended by a further 300 pages. The already impressive list of contributors has been trebled and includes names very well known on both sides of the Atlantic. Maingot writes portions of the book himself.

As with the previous edition the book is almost encyclopaedic in its treatment of the subject matter, which is not limited to abdominal operations, but includes the fullest discussion of the disease processes for which the operations are required.

The illustrations showing the operative technique step by step have been admirably chosen, and when one has Maingot's simple and beautifully clear descriptive style of writing added to this, the product is necessarily both instructive and absorbingly interesting. This is a compliment which cannot be paid to the majority of surgical text-books.

The author has carefully selected the subjects which have been added to this edition, and '*Megacolon; Hirschsprung's Disease*', by Dennis Browne, '*Portal Hypertension*' by Alan Hunt and '*Pelvic Exenteration*' by Alexander Brunschweig are perhaps deserving of special mention.

Capper's contribution on *The Dumping Syndrome and other Undesirable Sequelae of Gastrectomy* makes interesting reading—but it is as well to see this in its proper perspective and, at the end, to recall his introductory remark that after subtotal gastrectomy 'nearly seventy per cent of patients are completely free of indigestion and pain and are able to eat anything they want without any untoward symptoms'. How many surgical procedures or regimes can offer this chance of cure in so painful and often crippling a condition?

One hesitates to criticize so excellent a book, but it would seem at times that an unnecessary amount of space has been spent on some procedures now almost obsolete and the section on diaphragmatic hernia does not embrace some of the best and most recent work on the subject.

This book is probably the best on the subject in the English language and is a most valuable component in the library of the practising surgeon as well as an excellent guide for the examination candidate.

P.C.W.M.

UROLOGY YEAR BOOK

Year Book of Urology. 1954-55 *Series.* By miscellaneous contributors. Edited by William Wallace Scott, M.D., Ph.D. Pp. 372, with 83 figures. $6.0. Chicago: Year Book Publishers, Inc. 1955.

Contents: I. Mexican Urology. II. General Considerations. 1. Infections, including Gonorrhoa. 2. Calculi. 3. Urography, Instruments and Appliances. 4. Miscellaneous. III. The Kidney. 1. Anomalies. 2. Tumors. 3. Tuberculosis. 4. Trauma. 5. Renal Failure. 6. Nephritis and Nephrosis. 7. Hypertension. 8. Physiology. 9. Transplantation. 10. Hydronephrosis. 11. Miscellaneous. IV. The Adrenals. 1. The Adrenogenital Syndrome and Cortical Tumors. 2. Medullary Tumors. 3. Adrenalectomy for Hypertension and Cancer. V. The Ureter. 1. Anomalies. 2. Calculi. 3. Ureterointestinal Anastomosis. 4. Miscellaneous. VI The Bladder. 1. Tumors. 2. Micturition. 3. Neurogenic Bladder. 4. Trauma. 5. Surgical Technic. VII. The Prostate. 1. Prostatitis. 2. Prostatectomy. 3. Calculi. 4. Carcinoma. VIII. The Genitalia. 1. Penis. 2. The Urethra (Including Treatment of Gonorrhea and Strictures). 3. Hypospadias. 4. Testis Tumors. 5. Scrotal Swellings. 6. Epididymides, Vasa and Seminal Vesicles. 7. Fertility and Sterility. 8. Cryptorchism. 9. Miscellaneous.

This volume, once again edited by W. W. Scott, maintains the standard set by its predecessors. The editor has made a wide sweep of the urological literature between November 1953 and October 1954. Articles from American, British, French, Scandinavian, South African and other sources have been abstracted. On the whole, the selection has been good.

Problems of renal transplantation, the diagnosis and treatment of adrenal tumours, particularly pheochromocytomata, the formation of an artificial bladder from an isolated loop of ilium, and pelvic exenteration, are among the subjects reviewed.

The articles on carcinoma of the bladder reflect the still unsatisfactory nature of treatment and the divergence of views among urologists about the precise indications for the various forms of treatment.

The only value of a great deal of the work in physiology and on

animal experimentation which is included in these abstracts must be to stimulate reference to the original articles.

The absolute necessity for uretero-sigmoidostomy in extrophy of the bladder is questioned by Sweetser and others, who describe a technique of reconstruction with free fascial autografts.

Articles on the antibiotic therapy of renal tuberculosis do not nclude a reference to the fibrosis which so often threatens the existence of the kidney remaining after nephrectomy—a fibrosis which appears to be hastened by the treatment.

Only one type of prostatectomy—the retropubic—is reviewed, a fact noted apologetically by the author.

On page 205, in the caption under figure 39, dealing with the physiology of micturition, '7½ minutes' is printed where '7½ seconds' was obviously intended.

The production, type and illustrations are excellent and the lively and stimulating editorial comments are as good as ever.

Addiction to Year Books may be a vice. They certainly cannot replace a full perusal of original articles. This Year Book is full of interesting and suggestive material and if accorded its proper place in a reading programme cannot fail to be of value to urologists and others.

J.A.C.

SYNOPSIS OF SURGERY

Hey Groves' Synopsis of Surgery. Edited by Sir Cecil P. G. Wakeley, By., K.B.E., C.B., LL.D., M.Ch., D.Sc., F.R.C.S., F.A.C.S., F.R.A.C.S. 14th Edition. (Pp. 660 + viii, 190 illustrations. 13 plates in colour. 30s.) Bristol: John Wright & Sons Ltd. 1954.

Contents: Preface to 14th Edition. From the Preface to 1st Edition. 1. Inflammation and Suppuration. 2. Sinus, Fistula, and Ulcers. 3. Gangrene. 4. Acute Surgical Infections. 5. Gonorrhoea. 6. Syphilis. 7. Tuberculosis and Actinomycosis. 8. Tumours and Cysts. 9. Wounds. 10. Asepsis and Antisepsis. 11.Chemotherapy and Antibiotics. 12. Shock and Syncope. 13. Injuries of Bloodvessels. 14. Diseases of Arteries. 15. Diseases of Veins and Lymphatics. 16. Affections of the Skin. 17. Injuries and Diseases of Nerves. 18. Affections of Muscles, Tendons, Synovial Sheaths, and Bursae. 19. Deformities. 20. Fractures. 21. Diseases of Bones. 22. Injuries of Joints. 23. Diseases of Joints. 24. Injuries and Diseases of the Spine. 25. Head Injuries. 26. Diseases of the Cranium, Brain and Middle Ear. 27. Diseases of the Lips and Jaws. 28. Affections of the Nose. 29. Affections of the Tongue. 30. Affections of Salivary Glands, Tonsils, Pharynx, and Oesophagus. 31. Affections of the Neck. 32. Diseases of the Air-Passages and Chest. 33. Diseases of the Breast. 34. Injuries of the Abdomen. Peritonitis. 35. Diseases of the Appendix. 36. Injuries and Diseases of the Stomach. 37. Intestinal Obstruction. 38. Hernia. 39. Diseases of the Colon. 40. Diseases of the Rectum and Anus. 41. Affections of the Liver and Bile-Ducts. 42. Affections of the Pancreas and Spleen. 43. Affections of the Kidneys and Ureters. 44. Affections of the Bladder. 45. Diseases of the Prostate. 46. Affections of the Urethra. 47. Diseases of the Male Genital Organs. 48. Amputations. 49. Surface Markings. Index.

It is 7 years since the previous edition of this book was published, and much new material has been introduced into the present volume.

It appears in its familiar form, although a little fatter than before, and it covers practically the whole of surgery, including orthopaedics. Although it is a new edition with many chapters re-written and several new chapters added, it is unfortunately still not up to date. It is probably inevitable that all text-books of any great size, especially when the subject matter is being subjected to such rapid change as has occurred in the field of surgery in recent times, are never quite up to date.

At various places in the book, treatment by antibiotics is mentioned, but the doses given are mostly inadequate as judged by modern standards, while the newer 'wide spectrum' of antibiotics are not mentioned at all.

The subject of varicose veins, stasis ulcer and ankle blow-out syndrome—one which constantly disturbs the medical student, mainly because it is poorly dealt with in most text-books—is also very inadequately described in this present volume. A visit to any surgical out-patient department is convincing proof of how common and therefore how important this subject is.

Carcinoma of the breast is today classified clinically for the purpose of treatment and prognosis into 4 well-defined stages, which are almost universally recognized, at least in the English-speaking world; yet no mention is made of it in the book.

Intravenous fluid and electrolyte therapy, both pre-operative and post-operative, is an important part of surgery today. Here again the book falls short.

On the whole one feels that this book is really of little value to the medical student. His best synopsis is the one he prepares himself from his routine lectures and clinics.

Possibly the busy practitioner, on the other hand, may find the book of more value, but he must remember that any book is never quite up-to-date.

W.G.S.

HISTOLOGY

Aids to Histology: Sixth Edition. By Geoffrey H. Bourne, D.Phil., D.Sc. Pp. 160 + vii, with 59 illustrations. 6s. London: Baillière, Tindall and Cox Ltd. 1954.

Contents: 1. Cytology. 2. Fixation and staining. 3. Epithelia. 4. The Connective Tissues. 5. Muscular Tissue. 6. The Skin, Hair, Nails and Skin Glands. 7. The Blood, Blood Vessels and Heart. 8. The Alimentary Tract and its associated Glands. 9. The Respiratory System. 10. The Endocrine Glands. 11. The Urinary System. 12. The Male and Female reproductive organs. 13. The Eye, Ear and Nose. 14. The Nervous System. Index.

Six editions of this little book have appeared since 1911, clearly indicating the demand amongst medical students for a summary of the subject. There are many ways of teaching histology—as a basis for the pathologist, as a morphological accompaniment to physiology, as an academic discipline. While an Aid cannot be criticized from the same viewpoint as a text-book, the reviewer is of opinion that this publication falls short of all these aims. The illustrations are inadequate; no subject suffers as much as Histology from this defect. The description of bone marrow is of little use to the modern student. The section on the liver makes no mention of our new knowledge of the lobule, with its pathological implications, and progress since the 1930s in our understanding of the structure and function of the capillaries has been ignored.

On the other hand, recent advances in histochemistry (to which the author has made no mean contribution) receive laudable attention. Although this knowledge is only beginning to be applied to pathology, the rate of progress is such that no medical student should be ignorant of such aspects as the chemistry of connective tissue.

Considerable revision is thus required on the micro-anatomical plane, but the book does indicate a welcome trend in histological teaching.

B.L.

CORRESPONDENCE : BRIEWERUBRIEK

PSYCHIATRIC DIAGNOSIS

To the Editor: Cynicus in the *Journal* of 13 August 1955 (**29,** 780) was brief though not quite to the point. It is only after many years of observation and cross-checking that one can statistically substantiate any medical treatment procedure. The advocates of the anti-poliomyelitis vaccine have at present much the same problem. Yet they have not hesitated to recommend it despite the comparative paucity of their clinical trials and the short period that has elapsed since these were undertaken. All honour to them for doing their best to alleviate the poliomyelitis dangers.

However, I have recently seen an article by an American specialist in psychiatry who, with a quarter of a century of specialist psychiatric practice behind him, also advocates the type of psychological investigation and treatment set out in the references to my article[1] in the *Journal* of 23 July 1955. I have asked him to let me have his statistics and will forward them to the *Journal* on receipt.

The tenor of *Cynicus*' letter leads me to think that he is a registered specialist in psychiatry, and the statistics of L. Gilbert Little, M.D., the experienced American specialist mentioned, should prove acceptable. A copy of Dr. Little's article would be gladly forwarded to *Cynicus* should he care to get in touch with me, as well as to other interested practitioners, whether specialists or not. I can assure them that it makes most interesting, if 'startling', reading and provides a fundamental contribution to therapeutics in the pure psychiatric and psychosomatic fields.

J. J. de Villiers

154 Pine St., Arcadia, Pretoria,
26 August 1955.

1. de Villiers, J. J. (1955): S. Afr. Med. J., **29,** 712.